

**2019 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**MISSISSIPPI POWER COMPANY
PLANT JACK WATSON
ASH POND**

August 1, 2019

Prepared for

Mississippi Power Company
Gulfport, Mississippi

By

Southern Company Services
Earth Science and Environmental Engineering



CERTIFICATION STATEMENT

This 2019 Annual Groundwater Monitoring and Corrective Action Report, Mississippi Power Company - Plant Jack Watson – CCR Ash Pond has been prepared in compliance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) by a licensed professional geologist with Southern Company Services.



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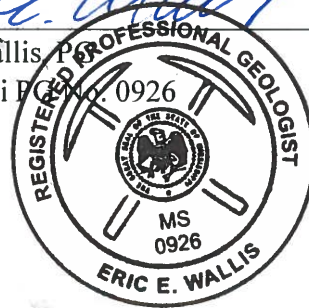


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1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 C.F.R. Part 257 Subpart D) this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document groundwater monitoring activities at Mississippi Power Company's (MPC) Plant Jack Watson Electric Generating Plant (Plant Watson) Ash Pond and satisfy the requirements of § 257.90(e). Initial detection monitoring, semiannual monitoring, and associated reporting for the Ash Pond is performed in accordance with the monitoring requirements § 257.90 through § 257.94.

Plant Watson is located in Harrison County near the city of Gulfport, Mississippi. The physical address of the plant is 10406 Lorraine Road, Gulfport, Mississippi 39503. The Ash Pond is located southeast of the plant and west of the Biloxi River. **Figure 1, Site Location Map**, depicts the location of the Plant and Ash Pond with respect to the surrounding area.

The Ash Pond ceased receiving CCR waste in April 2015 and closure was complete in May 2018. As part of closure, the Ash Pond was dewatered sufficiently to remove the free liquids. The CCR material remaining in the Ash Pond was graded and a final cover system installed. The final cover system consists of ClosureTurf[®] cover system by WatershedGeo[™] that utilizes a 50-mil linear low-density polyethylene (LLDPE) geomembrane overlain by an engineered synthetic turf. The cover system was constructed to control, minimize or eliminate, to the maximum extent feasible, the infiltration of liquids into the waste by providing sufficient grades and slopes to promote surface runoff from the site. The permeability of the final cover system is less than the permeability of the natural subsoils beneath the surface impoundment and not greater than 1×10^{-5} centimeters/second.

The Ash Pond is an inactive CCR unit that ceased receiving waste prior to April 17, 2015. A notification of intent to close the Ash Pond was placed in the operating record on December 15, 2015 and posted to the internet within 30 days. The Ash Pond was closed in May 2018 and the Certification of Closure was posted to the internet on June 4, 2018. Therefore, groundwater monitoring and reporting for the Ash Pond is being completed in accordance with the alternate schedule in § 257.100(e)(5) of the revised CCR rule (August 5, 2016). This report documents the activities completed to establish the groundwater monitoring program including monitoring well installation, background sampling, and actions through August 1, 2019, in accordance with 40 CFR § 257.90(e).

2.0 REGIONAL GEOLOGY & HYDROGEOLOGIC SETTING

Harrison County, Mississippi lies within the Eastern Section of the Gulf Coastal Plain physiographic province (USGS, 1998). The topography of Harrison County is gently rolling to flat with elevations ranging from 200 feet (ft) above mean sea level (MSL) inland to approximately 0 ft MSL near the coastal waterbodies (USGS, 1985). Local site elevations near the Ash Pond are between 25 and 5 ft MSL.

The subsurface geology at the site is characterized by deposits of clay, silt, and sand deposited between the Pliocene and Holocene series. This sequence of sediments has been subdivided, from oldest to youngest, into the units of Upper Graham Ferry Member of the Pensacola Formation, Citronelle Formation, Biloxi Formation, Prairie Formation, and Holocene coastal wetland, deltaic, and alluvium deposits (Otvos, 2001). The unconsolidated sediment at the site is underlain by Pliocene and Miocene sedimentary rocks at depths greater than -500 ft MSL (USGS, 1998; Hoffmann et al, 2017).

At the Site, four geologic units have been encountered surrounding and underlying the Ash Pond and are described from shallowest to deepest as follows:

- Unit 1 is dike fill material comprising the dike along the perimeter of the Ash Pond with a thickness ranging from 0 to 20 feet
- Unit 2 is a sandy clay to clay aquitard underlying the Ash Pond. The unit corresponds to the Biloxi Formation and ranges from 5 to 20 feet thick. Permeability testing conducted on Unit 2 soils indicate a permeability in the 10^{-8} centimeters/second (cm/s) range.
- Unit 3 is a fluvial sand aquifer corresponding to the Citronelle Formation. The unit is approximately 40 feet thick. Unit 3 is the uppermost aquifer at the site for groundwater monitoring purposes.
- Unit 4 is a clay aquitard underlying the Unit 3 aquifer and is continuous across the site. Unit 4 corresponds to the Upper Graham Ferry Formation. Permeability testing conducted on Unit 4 clays, indicates a permeability in the 10^{-8} cm/s range.

All site monitoring wells are screened in the uppermost aquifer beneath the site in the Unit 3 sands corresponding to the Citronelle Formation. The Unit 3 sand aquifer is typically located at elevations between 0 and -42 ft MSL. The Unit 3 sand generally consists of fine to coarse well-graded sands with occasional lenses of clay and preserved wood fragments or tree logs. Groundwater recharge to the uppermost aquifer is largely through infiltration of precipitation. Monitoring wells and piezometers were screened in the uppermost aquifer between -1.5 and -42 ft MSL.

A subsurface cement-bentonite slurry wall was installed around the perimeter of Ash Pond to provide structural support of the soil berms between 1994 and 2000. The subsurface wall was

installed through the Unit 3 aquifer and keyed into the underlying Unit 4 aquitard. Although installed primarily for structural stability, the subsurface wall impedes groundwater flow within Unit 3 beneath the Ash Pond. Unit 3 groundwater monitoring wells are installed outside of the subsurface wall.

3.0 GROUNDWATER MONITORING ACTIVITIES

As required by § 257.90(e), the following describes monitoring-related activities performed during the preceding year. Since this is the first *Annual Groundwater Monitoring and Corrective Action Report*, it also describes activities performed to establish the groundwater monitoring program. Groundwater sampling was performed in accordance with § 257.93.

3.1 Groundwater Monitoring System Installation and Maintenance

Pursuant to § 257.91, a groundwater monitoring system was installed to monitor groundwater within the uppermost aquifer. The Professional Engineer (PE)-certified groundwater monitoring system for the Ash Pond is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. **Table 1, Groundwater Monitoring Network Details**, summarizes the monitoring well construction details and design purpose for the Ash Pond. Monitoring well sin the certified monitoring system are shown on **Figure 2, Monitoring Well Location Map**.

The groundwater monitoring system installed at the CCR unit (1) consists of a sufficient number of wells, (2) was installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) meets the performance standards of 40 CFR § 257.91(a). The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of Site-specific hydrogeologic conditions and certified by a PE. Wells were located to serve as upgradient or downgradient monitoring points based on groundwater flow direction as determined by site conditions and groundwater elevation measurements. All groundwater monitoring wells were designed and constructed using “Standard Practice for Design and Installation of Groundwater Monitoring Wells in Aquifers”, ASTM D5092, as a guideline.

The groundwater monitoring network is comprised of 12 monitoring wells shown on Figure 2.

In summary, monitoring well installation and maintenance activities included:

- Installing downgradient groundwater monitoring wells APMW-1 through APMW-10 in July 2016;
- Installing upgradient groundwater monitoring wells APMW-11 and APMW-12 (originally designated PZ-1 and PZ-2) in January 2019;
- Installing piezometers PZ-3 and PZ-4 near monitoring well APMW-6 location in January 2019;
- Designating PZ-3 as replacement well APMW-6R after observing that the integrity of well APMW-6 had been compromised prior to the April 2019 detection monitoring event; and
- Installing monitoring well APMW-1R to replace APMW-1 in the downgradient network in January 2019.

In January 2019 two additional piezometers (PZ-3 and PZ-4) were installed adjacent to well APMW-6 to further evaluate hydrogeologic conditions in this area. Subsequent to the April 2019 detection monitoring event, sand and pea stone were observed in the well indicating that the casing had been compromised. Piezometer PZ-3 was re-designated as APMW-6R and replaced APMW-6 in the PE-certified monitoring network.

Well APMW-1R was installed as a replacement for well APMW-1 because a portion of the APMW-1 well screen was installed within a clay lens causing the well to exhibit slightly elevated turbidity during purging. Groundwater quality from well APMW-1R was evaluated and the well has been incorporated into the PE-certified monitoring network as a replacement for APMW-1.

3.2 Background and Detection Monitoring

In accordance with § 257.94(b), eight independent samples were collected from each background and downgradient well and analyzed for the constituents listed in Appendix III and IV between April 2018 and February 2019. Additionally, “catch-up” background sampling events were conducted in March, April, May, and June of 2019, for new monitoring wells APMW-11 and APMW-12 and in April, May, and June of 2019 for replacement monitoring wells APMW-1R and APMW-6R. Analytical data from the groundwater monitoring events is included as **Appendix A, Groundwater Analytical Data**, in accordance with the requirements of § 257.90(e)(3).

Groundwater samples were collected in April 2019 and analyzed for Appendix III constituents as part of the first semiannual detection monitoring event. Pursuant to § 257.90(e)(3), data reports for each sampling event is included in **Appendix A**.

Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed during background as well as the April 2019 detection monitoring event. **Table 2** also identifies the purpose of the sampling event (i.e., background, detection, etc.).

4.0 GROUNDWATER SAMPLING AND ANALYSIS

The following describes the methods used to conduct groundwater monitoring at the Ash Pond. Analytical data from the groundwater monitoring events is included as **Appendix A** in accordance with the requirements of § 257.90(e)(3).

4.1 Groundwater Elevation Measurement

Prior to recording water levels each well was opened and allowed to equilibrate to atmospheric pressure. Within a 24-hour period, depths to groundwater were measured to the nearest 0.01 foot with an electronic water level indicator. Depths are referenced from the top of the well casing. Groundwater elevations are calculated by subtracting the depth to groundwater from surveyed top of casing (TOC) elevations.

Groundwater elevations fluctuate in response to rainfall and tides. Seasonal variations of 1.5 to 2.5 feet are typical at the site. **Table 3, Summary of Groundwater Elevations**, provides a summary of water level data for the site observed in 2018 and 2019 groundwater monitoring events.

Groundwater elevation data was used to develop the potentiometric surface elevation contour map provided as **Figure 3, Groundwater Elevations Map (April 2019)**. As shown on **Figure 3**, the general direction of groundwater flow is from west to east and radially from the Ash Pond. The groundwater flow pattern observed during the April 2019 detection monitoring event is consistent with observations made during the background period.

4.2 Groundwater Sampling

Groundwater samples were collected in accordance with § 257.93(a). Each of the monitoring wells at the Ash Pond is equipped with a dedicated bladder pump, except for recently-installed wells APMW-11, APMW-12, APMW-6R, and APMW-1R. For wells without dedicated pumps, a peristaltic pump along with disposable polyethylene tubing was used to purge and sample from the middle of the well screen interval.

A SmarTroll (In-Situ field instrument) was used to monitor and record field water quality parameters (pH, conductivity, oxygen-reduction potential, temperature, and dissolved oxygen) during well purging to verify stabilization prior to sampling. Turbidity was measured using a Hach 2100Q (or similar) portable turbidimeter. Groundwater samples were collected when the following stabilization criteria were met:

- 0.1 standard units for pH
- 5% for specific conductance
- 0.2 Mg/L or 10% for DO > 0.5 mg/l (whichever is greater)
- Turbidity measurements less than 5 NTU

- Temperature and ORP – record only, no stabilization criteria

Once stabilization was achieved, samples were collected directly into appropriately preserved laboratory-supplied sample containers and placed in iced coolers and submitted to Test America, Inc. (TAL) following chain-of-custody protocol.

4.3 Laboratory Analysis

Groundwater samples collected for background data included both Appendix III and Appendix IV parameters. Groundwater samples collected during the April 2019 detection monitoring event were analyzed for Appendix III monitoring parameters only. Analytical methods used for groundwater sample analysis are listed on the analytical laboratory reports included in **Appendix A**.

Laboratory analyses were performed by TAL in Pensacola, Florida; Pittsburg, Pennsylvania; and St. Louis, Missouri. The TAL locations are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. Groundwater data chain-of-custody records for the monitoring events are presented in **Appendix A**.

4.4 Quality Assurance/Quality Control

During each sampling event, quality assurance/quality control (QA/QC) samples were collected at a rate of one sample per every 10 detection samples. Equipment blanks and duplicate samples were also collected during each sampling event. QA/QC sample data was evaluated during data validation and is included in **Appendix A**.

Groundwater quality data presented in the report was independently validated following guidance from the EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011); and the analytical methods. Data validation consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences (RPDs), post digestion spikes, laboratory and field duplicate RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data using the procedures in EPA National Functional Guidelines for Inorganic Data Review (USEPA, 2014), as guidance. A narrative providing the results of the data validation is provided in **Appendix A**.

5.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III groundwater monitoring data was performed on samples collected from the certified groundwater monitoring network pursuant to § 257.93 following the PE-certified statistical method for the Ash Pond. The statistical method used at the site was developed by Groundwater Stats Consulting, LLC. (GSC), in accordance with 40 CFR §257.93(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, EPA 530/R-09-007 (USEPA, 2009). To develop the statistical method, analytical data collected during the background period were evaluated and used to develop statistical limits for each Appendix III parameter. Subsequent detection monitoring results were compared to the statistical limits to determine if concentrations were statistically different from background.

5.1 Statistical Method

The selected statistical method for the Ash Pond was developed in accordance with 40 CFR § 257.93(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, USEPA 530/R-09-007 (Unified Guidance). The Sanitas statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA Unified Guidance (2009) document.

Interwell prediction limits (PL), combined with a 1-of-2 verification resample plan is the statistical method used to evaluate the groundwater monitoring data at the Ash Pond. Interwell PLs pool upgradient well data to establish a background limit for an individual constituent. This method is appropriate where there is no significant variability in the data to be pooled as determined using an Analysis of Variability (ANOVA) test. The most recent sample from each downgradient well is compared to the background limit to identify statistically significant increases (SSIs) over background.

If data from a detection monitoring sampling event initially exceed the PL, the resampling strategy may be used to verify the result within 90 days. If the resample exceeds the PL, the initial exceedance is verified and an SSI of that Appendix III parameter is determined. When the resample result does not verify the initial result, the initial exceedance is considered an erroneous result and the resample value will replace the initial result. If resampling is not conducted the initial exceedance is verified.

Time series plots were used to screen proposed background data for suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective. Suspected outliers at all wells for Appendix III parameters are formally tested using Tukey's box

plot method and, when identified, flagged in the computer database with “o” and deselected prior to construction of statistical limits.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Parametric prediction limits are used when the screened historical data follow a normal or transformed-normal distribution. When data could not be normalized or when the majority of data were non-detects, a non-parametric test was utilized. The confidence level associated with both tests is greater than 99%. The confidence levels associated with parametric prediction limits are based on an overall false positive rate of 5%. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized where the highest background value is used to establish the upper prediction limit (and lowest value in the case of pH). The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (USEPA Unified Guidance, 2009), data are analyzed using either parametric or non-parametric prediction limits.

The following guidance is also applicable to the statistical analysis method:

- Statistical analyses are not performed on analytes containing 100% non-detects (EPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in the background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL), or reporting limit (RL), reported by the laboratory.
- When data contain between 15-50% non-detects the Kaplan-Meier non-detect adjustment is applied to the background data.
- Non-parametric prediction limits are used on data containing greater than 50% non-detects.

5.2 Statistical Analysis Results

Analytical data from the April 5, 2019 monitoring event at the Ash Pond has been statistically analyzed in accordance with the Site's certified statistical analysis method. Verification resampling to confirm initial SSIs was not performed; therefore, initial SSIs are considered verified. The statistical results of the monitoring event are included in **Appendix B, Statistical Analyses**.

Statistical analysis of Appendix III data identified SSIs over background of boron, calcium, chloride, sulfate, and total dissolved solids (TDS) in all downgradient wells except sulfate in APMW-1R. No SSIs were identified for fluoride or pH in downgradient wells.

Time series plots provided in **Appendix B** were used to evaluate concentrations in wells over time and to visually compare concentrations in downgradient wells to those in background wells. While trends may be visual, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. The Sen's Slope/Mann Kendall trend test was performed for all wells and parameters where SSIs were observed (listed above) to determine whether concentrations are statistically significantly increasing, decreasing or stabilizing over time. Additionally, upgradient wells were included in the trend analyses as a reference for the same parameters. A trend test summary table is provided in **Appendix B**.

5.3 Appendix IV Background Data

In accordance with 40 CFR §257.95, MPC will statistically analyze and compare Appendix IV groundwater quality data to groundwater protection standards in any assessment monitoring phase.

6.0 MONITORING PROGRAM STATUS

The Ash Pond is in detection monitoring. SSIs of Appendix III parameters have been identified. MPC will address the reported SSIs in accordance with the requirements of § 257.94(e)(1-3) and (f).

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *Annual Groundwater Monitoring and Corrective Action Report*, has been prepared to fulfill the requirements of USEPA CCR rule 40 CFR 257 Subpart D. Statistical evaluations of the groundwater monitoring data for the Ash Pond identified SSIs of Appendix III groundwater monitoring parameters. In accordance with § 257.94(e)(1), MPC will initiate assessment monitoring program within 90 days unless an alternate source demonstration is completed. The next semiannual sampling event is scheduled for the fourth quarter of 2019.

8.0 REFERENCES

- ASTM Standard D5092, 2004, Standard Practice for Design and Installation of Groundwater Monitoring Wells, ASTM International, West Conshohocken, PA, DOI 10.1520/D5092-04R10E01, www.astm.org.
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- Stewart, L. and J.F. Everett. (2002). Groundwater Study of Historical Water-Level and Water-Quality Data in Harrison County, Mississippi. Mississippi Department of Environmental Quality. Open-fileReport 02-102.

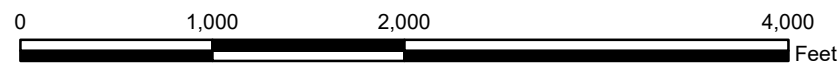
FIGURES



Service Layer Credits: USDA, NRCS, MARIS

Legend

- Plant Watson Property Boundary
- CCR Unit Boundary



SCALE	1:12000
DATE	7/19/2019
DRAWN BY	KAR
CHECKED BY	CTL

DRAWING TITLE
**SITE LOCATION MAP
 PLANT WATSON ASH POND**




FIGURE NO
FIGURE 1

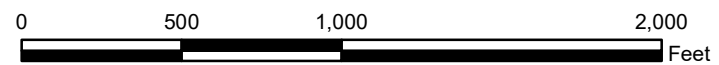




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Legend

-  Upgradient Monitoring Well
-  Downgradient Monitoring Well
-  CCR Unit Boundary



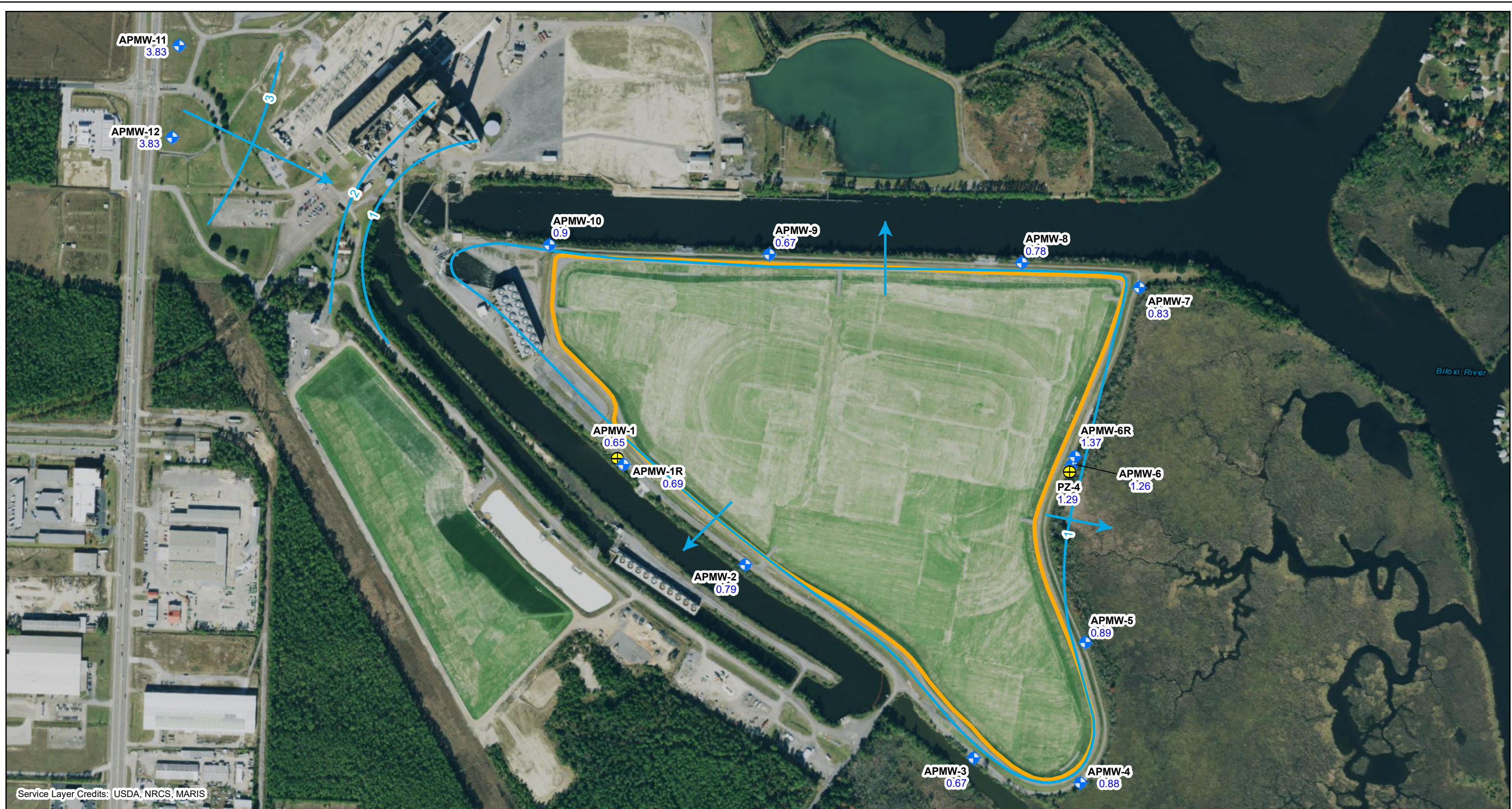
NOTE: *APMW-6 to be abandoned in 2019

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**MONITORING WELL NETWORK
 PLANT WATSON ASH POND**






FIGURE NO
FIGURE 2

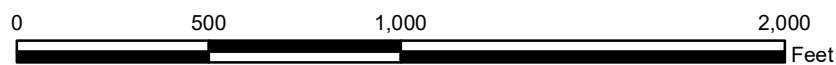




Service Layer Credits: USDA, NRCS, MARIS

Legend

-  Monitoring Well **APMW-1** Well Name
0.65 Groundwater Elevation (ft NAVD88)
-  Piezometer
-  Estimated Groundwater Elevation Contour (ft NAVD88)
-  Inferred Groundwater Flow Direction
-  CCR Unit Boundary



NOTE: ft NAVD88 indicates feet above North American Vertical Datum of 1988

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GROUNDWATER ELEVATIONS MAP
 APRIL 2019
 PLANT WATSON ASH POND

FIGURE NO
FIGURE 3



TABLES

Table 1. Groundwater Monitoring Network Details

Well Name	Installation Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Purpose
APMW-1	7/12/2016	339968.4	924453.57	22.48	24.86	-1.52	-12.54	Water Level
APMW-1R	1/24/2019	339938.3	924486.3	22.5	25.16	-7.5	-12.17	Downgradient (APMW-1 Replacement)
APMW-2	7/18/2016	339436.26	925145.2	19.95	22.58	-9.05	-20.32	Downgradient
APMW-3	7/18/2016	338466.67	926382.75	5.6	8.4	-17.4	-28.1	Downgradient
APMW-4	7/19/2016	338360.09	926947.41	10.76	13.39	-13.24	-23.71	Downgradient
APMW-5	7/19/2016	339095.64	926946.56	6.01	8.68	-17.99	-27.92	Downgradient
APMW-6	7/20/2016	340025.9	926838.72	7	8.91	-16	-26.59	Not Applicable ³
APMW-6R	1/29/2019	340071.3	926854.6	5.5	8.11	-31.75	-42.17	Downgradient (APMW-6 Replacement)
APMW-7	7/20/2016	340970.41	927159.53	10.5	13	-14.5	-24.4	Downgradient
APMW-8	7/21/2016	341076.09	926536.95	18.08	21	-6.92	-21.8	Downgradient
APMW-9	7/21/2016	341069.72	925210.34	19.83	22.41	-9.17	-20.09	Downgradient
APMW-10	7/22/2016	341075.2	924053.45	18.2	21.11	-1.8	-11.79	Downgradient
APMW-11	1/24/2019	342047.37	922071.42	19.6	22.45	-18.59	-28.59	Upgradient
APMW-12	1/28/2019	341563.98	922052.04	17.1	20.06	-22.44	-33.02	Upgradient

Notes:

1. Northing and easting are in feet relative to the State Plane Mississippi East North America Datum of 1983.
2. Elevations are in feet relative to the North American Vertical Datum of 1988.
3. APMW-6 was damaged and is no longer part of the monitoring network. The damaged well is scheduled for abandonment in 2019.

Table 2. Groundwater Sampling Event Summary

Event	BKG 1	BKG 2	BKG 3	BKG 4	BKG 5	BKG 6	BKG 7	BKG 8	Detection
APMW-1R	Mar-19	Mar-19	Apr-19	Apr-19	May-19	May-19	May-19	Jun-19	Apr-19
APMW-2	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-3	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-4	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-5	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-6R	Apr-19	Apr-19	May-19	May-19	May-19	Jun-19	Jun-19	Jun-19	Apr-19
APMW-7	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-8	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-9	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-10	Apr-18	Jun-18	Jul-18	Sep-18	Oct-18	Nov-18	Dec-18	Feb-19	Apr-19
APMW-11	Mar-19	Mar-19	Apr-19	Apr-19	May-19	May-19	May-19	Jun-19	Apr-19
APMW-12	Mar-19	Mar-19	Apr-19	Apr-19	May-19	May-19	May-19	Jun-19	Apr-19

Notes:

1. BKG # indicates Background Event and the number corresponds with the event number.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 4/24/2018 (ft BTOC)	GW Elevation 4/24/2018 (ft MSL)
APMW-1	24.86	24.99	-0.13
APMW-2	22.58	22.96	-0.38
APMW-3	8.40	8.60	-0.20
APMW-4	13.39	12.92	0.47
APMW-5	8.68	7.57	1.11
APMW-6	8.91	7.19	1.72
APMW-7	13.00	12.12	0.88
APMW-8	21.00	21.42	-0.42
APMW-9	22.41	22.79	-0.38
APMW-10	21.11	21.23	-0.12

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 6/13/2018 (ft BTOC)	GW Elevation 6/13/2018 (ft MSL)
APMW-1	24.86	24.99	-0.13
APMW-2	22.58	22.96	-0.38
APMW-3	8.40	8.60	-0.20
APMW-4	13.39	12.92	0.47
APMW-5	8.68	7.57	1.11
APMW-6	8.91	7.19	1.72
APMW-7	13.00	12.12	0.88
APMW-8	21.00	21.42	-0.42
APMW-9	22.41	22.79	-0.38
APMW-10	21.11	21.23	-0.12

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 7/23/2018 (ft BTOC)	GW Elevation 7/23/2018 (ft MSL)
APMW-1	24.86	24.14	0.72
APMW-2	22.58	21.78	0.80
APMW-3	8.40	7.79	0.61
APMW-4	13.39	12.65	0.74
APMW-5	8.68	7.75	0.93
APMW-6	8.91	7.49	1.42
APMW-7	13.00	12.19	0.81
APMW-8	21.00	20.39	0.61
APMW-9	22.41	21.92	0.49
APMW-10	21.11	20.38	0.73

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 8/31/2018 (ft bTOC)	GW Elevation 8/31/2018 (ft MSL)
APMW-1	24.86	23.47	1.39
APMW-2	22.58	21.22	1.36
APMW-3	8.40	7.10	1.30
APMW-4	13.39	11.89	1.50
APMW-5	8.68	7.12	1.56
APMW-6	8.91	6.92	1.99
APMW-7	13.00	11.60	1.40
APMW-8	21.00	21.93	-0.93
APMW-9	22.41	21.40	1.01
APMW-10	21.11	19.81	1.30

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 10/1/2018 (ft BTOC)	GW Elevation 10/1/2018 (ft MSL)
APMW-1	24.86	23.80	1.06
APMW-2	22.58	21.52	1.06
APMW-3	8.40	7.44	0.96
APMW-4	13.39	12.03	1.36
APMW-5	8.68	7.12	1.56
APMW-6	8.91	7.02	1.89
APMW-7	13.00	11.78	1.22
APMW-8	21.00	20.01	0.99
APMW-9	22.41	21.46	0.95
APMW-10	21.11	19.76	1.35

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 11/1/2018 (ft BTOC)	GW Elevation 11/1/2018 (ft MSL)
APMW-1	24.86	23.85	1.01
APMW-2	22.58	21.80	0.78
APMW-3	8.40	7.55	0.85
APMW-4	13.39	12.00	1.39
APMW-5	8.68	6.85	1.83
APMW-6	8.91	6.68	2.23
APMW-7	13.00	11.12	1.88
APMW-8	21.00	19.94	1.06
APMW-9	22.41	22.10	0.31
APMW-10	21.11	19.83	1.28

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 12/6/2018 (ft BTOC)	GW Elevation 12/6/2018 (ft MSL)
APMW-1	24.86	25.50	-0.64
APMW-2	22.58	22.47	0.11
APMW-3	8.40	8.82	-0.42
APMW-4	13.39	12.96	0.43
APMW-5	8.68	7.92	0.76
APMW-6	8.91	7.61	1.30
APMW-7	13.00	12.42	0.58
APMW-8	21.00	21.52	-0.52
APMW-9	22.41	23.23	-0.82
APMW-10	21.11	21.95	-0.84

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 3. Summary of Groundwater Elevations – Background

Well ID	TOC Elev (ft MSL)	Depth to GW 2/19/2019 (ft BTOC)	GW Elevation 2/19/2019 (ft MSL)
APMW-1	24.86	24.13	0.73
APMW-1R	25.16	24.41	0.75
APMW-2	22.58	21.90	0.68
APMW-3	8.40	7.66	0.74
APMW-4	13.39	12.48	0.91
APMW-5	8.68	7.57	1.11
APMW-6	8.91	7.31	1.60
APMW-6R	8.11	6.44	1.67
APMW-7	13.00	11.94	1.06
APMW-8	21.00	20.16	0.84
APMW-9	22.41	21.66	0.75
APMW-10	21.11	20.15	0.96
APMW-11	22.45	18.03	4.42
APMW-12	20.06	15.71	4.35
PZ-4	7.93	6.31	1.62

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

Table 4. Summary of Groundwater Elevations – Detection

Well ID	TOC Elev (ft MSL)	Depth to GW 4/3/2019 (ft BTOC)	GW Elevation 4/3/20109 (ft MSL)
APMW-1	24.86	24.21	0.65
APMW-1R	25.16	24.47	0.69
APMW-2	22.58	21.79	0.79
APMW-3	8.40	7.73	0.67
APMW-4	13.39	12.51	0.88
APMW-5	8.68	7.79	0.89
APMW-6	8.91	7.65	1.26
APMW-6R	8.11	6.74	1.37
APMW-7	13.00	12.17	0.83
APMW-8	21.00	20.22	0.78
APMW-9	22.41	21.74	0.67
APMW-10	21.11	20.21	0.90
APMW-11	22.45	18.62	3.83
APMW-12	20.06	16.23	3.83
PZ-4	7.93	6.64	1.29

Notes:

1. TOC Elev indicates top of casing elevation
2. ft MLS indicates feet relative to mean sea level.
3. BTOC indicates below top of casing.

APPENDIX A

GROUNDWATER ANALYTICAL DATA

Product Name: Low-Flow System

Date: 2018-04-24 12:13:06

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.99 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 40 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:45:53	4805.72	26.93	5.91	5656.54	13.30	24.76	-0.00	-453.06
Last 5	11:50:53	5105.72	26.97	5.91	5743.86	14.50	24.77	0.00	-462.80
Last 5	11:55:53	5405.72	27.15	5.92	5853.73	13.00	24.76	-0.00	-472.25
Last 5	12:00:55	5707.72	27.20	5.92	5967.23	13.20	24.76	-0.00	-480.42
Last 5	12:05:55	6007.72	27.38	5.91	6050.14	11.70	24.76	-0.00	-487.41
Variance 0			0.19	0.00	109.87			-0.01	-9.45
Variance 1			0.05	-0.00	113.50			-0.00	-8.16
Variance 2			0.18	-0.00	82.91			-0.00	-7.00

Notes

Sample time 1210. Field filtered.45um for metals also collected. Sunny 70. Collected sample per Cale Sellers.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-24 14:27:34

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 22.11 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:02:25	2699.98	26.29	5.87	8421.58	5.81	22.29	0.16	-35.82
Last 5	14:07:25	2999.98	26.83	5.87	8449.86	3.64	22.29	0.16	-37.31
Last 5	14:12:25	3299.98	26.57	5.87	8520.46	3.12	22.27	0.17	-37.98
Last 5	14:17:25	3599.98	26.51	5.88	8479.67	2.51	22.27	0.16	-38.63
Last 5	14:22:25	3899.98	26.23	5.89	8439.50	2.27	22.26	0.16	-38.60
Variance 0			-0.26	0.00	70.60			0.00	-0.67
Variance 1			-0.06	0.01	-40.79			-0.00	-0.65
Variance 2			-0.28	0.01	-40.17			-0.00	0.03

Notes

Sample time 1426. PC 77.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-24 15:43:58

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 31.5 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.5 ft
Screen Length 10 ft
Depth to Water 7.85 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:20:01	1200.02	25.86	6.40	30214.48	6.41	8.01	0.10	26.60
Last 5	15:25:01	1499.95	25.78	6.42	30216.08	5.94	8.01	0.10	14.66
Last 5	15:30:01	1799.95	25.72	6.43	30252.75	4.52	8.01	0.10	5.26
Last 5	15:35:01	2099.95	25.77	6.45	30133.63	2.93	8.00	0.10	-2.36
Last 5	15:40:01	2399.95	25.52	6.46	30080.92	2.80	8.00	0.10	-8.96
Variance 0			-0.06	0.02	36.67			0.00	-9.40
Variance 1			0.06	0.01	-119.12			-0.00	-7.62
Variance 2			-0.25	0.01	-52.71			0.00	-6.60

Notes

Sample time 1544. PC 79.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-24 17:42:52

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 12.57 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	17:18:33	3000.94	25.28	6.29	12737.65	3.15	12.72	0.10	-35.12
Last 5	17:23:33	3300.94	25.30	6.29	12796.16	2.58	12.72	0.11	-42.14
Last 5	17:28:33	3600.94	25.06	6.30	12848.17	2.19	12.72	0.11	-48.99
Last 5	17:33:33	3900.94	25.19	6.30	12816.74	1.75	12.72	0.10	-55.61
Last 5	17:38:33	4200.94	25.16	6.31	12827.05	1.78	12.72	0.11	-61.95
Variance 0			-0.24	0.00	52.01			0.00	-6.85
Variance 1			0.13	0.01	-31.43			-0.00	-6.61
Variance 2			-0.03	0.01	10.31			0.00	-6.34

Notes

Sample time 1741. Dup-01 fake sample time 1641. PC 79.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 08:07:11

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.71 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:44:14	300.03	23.46	5.64	25467.56	9.44	7.86	0.21	126.49
Last 5	07:49:14	600.02	23.55	5.85	25492.82	6.57	7.90	0.18	100.88
Last 5	07:54:14	900.02	23.59	5.95	25406.03	4.94	7.91	0.16	81.77
Last 5	07:59:14	1199.53	23.69	6.00	25344.16	4.40	7.91	0.15	57.39
Last 5	08:04:14	1499.53	23.69	6.04	25300.78	4.41	7.91	0.14	37.03
Variance 0			0.04	0.10	-86.79			-0.02	-19.12
Variance 1			0.11	0.05	-61.87			-0.01	-24.38
Variance 2			0.00	0.04	-43.38			-0.00	-20.36

Notes

Sample time 0808. Sunny 60.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 10:41:27

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.32 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 46 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:19:28	5701.96	25.03	6.80	7597.92	11.00	7.51	0.14	-148.80
Last 5	10:24:28	6001.95	24.95	6.81	7611.15	10.60	7.51	0.12	-150.17
Last 5	10:29:28	6301.95	24.87	6.83	7615.68	9.80	7.52	0.11	-152.00
Last 5	10:34:30	6603.92	25.03	6.84	7608.59	9.74	7.53	0.10	-153.64
Last 5	10:39:31	6904.92	24.87	6.85	7623.22	9.41	7.54	0.09	-155.45
Variance 0			-0.08	0.01	4.53			-0.01	-1.83
Variance 1			0.16	0.01	-7.09			-0.01	-1.64
Variance 2			-0.16	0.01	14.63			-0.01	-1.81

Notes

Sample time 1042. Sunny 70.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 12:50:52

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.23 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:26:22	4201.95	25.60	6.32	12449.96	9.10	12.92	0.06	-299.59
Last 5	12:31:22	4501.95	25.58	6.32	12509.28	8.51	12.88	0.06	-300.64
Last 5	12:36:22	4801.95	26.24	6.30	12714.55	5.66	12.83	0.05	-299.05
Last 5	12:41:22	5101.94	26.35	6.31	12651.25	5.75	12.73	0.07	-293.93
Last 5	12:46:22	5401.95	26.36	6.31	12630.67	5.52	12.67	0.08	-291.73
Variance 0			0.65	-0.01	205.27			-0.01	1.59
Variance 1			0.11	0.00	-63.30			0.02	5.11
Variance 2			0.01	0.00	-20.58			0.01	2.21

Notes

Sample time 1252. Sunny 78.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 14:20:44

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 20.66 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:56:52	1500.01	26.39	6.67	11561.55	13.40	20.82	0.14	-46.34
Last 5	14:01:52	1800.01	26.33	6.68	11568.35	6.70	20.80	0.13	-49.27
Last 5	14:06:53	2101.00	26.42	6.68	11573.08	6.24	20.80	0.12	-51.56
Last 5	14:11:53	2401.01	26.53	6.69	11551.28	4.52	20.80	0.11	-53.68
Last 5	14:16:53	2701.01	26.49	6.69	11547.56	4.19	20.79	0.11	-55.39
Variance 0			0.09	0.00	4.73			-0.01	-2.29
Variance 1			0.11	0.01	-21.80			-0.01	-2.13
Variance 2			-0.05	0.01	-3.71			-0.00	-1.71

Notes

Sample time 1421. Dup-02 fake sample time 1321. Sunny 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 16:39:34

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 46 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 22.09 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6853175 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.5 in
Total Volume Pumped 28 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:16:38	3000.92	26.28	6.18	9594.07	5.48	22.16	0.20	-29.46
Last 5	16:21:39	3301.92	26.20	6.18	9616.38	7.06	22.16	0.20	-31.15
Last 5	16:26:39	3601.92	26.19	6.19	9602.88	6.45	22.16	0.19	-32.53
Last 5	16:31:39	3901.89	26.11	6.19	9630.88	5.04	22.16	0.19	-33.68
Last 5	16:36:39	4201.89	26.19	6.19	9599.56	5.12	22.16	0.19	-34.57
Variance 0			-0.01	0.00	-13.50			-0.01	-1.37
Variance 1			-0.08	0.00	27.99			0.00	-1.16
Variance 2			0.08	0.00	-31.32			-0.01	-0.89

Notes

Sample time 1640. Sunny 82.

Grab Samples

Product Name: Low-Flow System

Date: 2018-04-25 17:36:01

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-1
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 20.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6674637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.5 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	17:14:34	600.02	26.51	6.54	5283.03	5.24	20.77	0.14	-51.19
Last 5	17:19:34	900.02	26.39	6.60	5333.04	1.47	20.77	0.13	-63.07
Last 5	17:24:34	1200.02	26.30	6.64	5359.49	1.25	20.77	0.12	-71.25
Last 5	17:29:34	1500.02	26.27	6.67	5376.51	0.74	20.77	0.11	-77.43
Last 5	17:34:34	1800.02	26.28	6.70	5386.90	0.69	20.77	0.11	-82.24
Variance 0			-0.08	0.04	26.45			-0.01	-8.18
Variance 1			-0.04	0.03	17.02			-0.01	-6.18
Variance 2			0.02	0.03	10.39			-0.00	-4.81

Notes

Sample time 1737. Sunny 82.

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 14:57:59

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.02 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:46:01	300.09	23.40	5.94	4804.19	13.00	24.12	0.04	-37.08
Last 5	14:51:01	600.03	23.43	5.94	4800.83	6.85	24.12	0.03	-40.79
Last 5	14:56:01	900.02	23.38	5.94	4808.95	4.85	24.12	0.03	-43.62
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.03	0.00	-3.36			-0.01	-3.70
Variance 2			-0.05	-0.00	8.12			0.00	-2.84

Notes

Sample@1457, EB-01@1510, cloudy 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 14:11:34

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 21.32 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:50:12	3300.02	24.05	5.92	8028.45	3.54	21.40	0.60	-20.74
Last 5	13:55:12	3600.03	23.94	5.92	8195.06	2.89	21.40	0.53	-10.21
Last 5	14:00:12	3900.02	23.69	5.95	8599.30	2.36	21.40	0.31	-21.07
Last 5	14:05:12	4200.02	23.61	5.96	8674.93	2.67	21.40	0.27	-24.65
Last 5	14:10:12	4500.02	23.59	5.96	8688.44	2.35	21.40	0.25	-26.22
Variance 0			-0.25	0.03	404.24			-0.22	-10.86
Variance 1			-0.08	0.01	75.62			-0.04	-3.59
Variance 2			-0.02	0.00	13.51			-0.01	-1.57

Notes

Sample@1411, cloudy 84

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 12:25:45

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 7.32 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.15 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:04:35	900.03	24.95	6.49	31606.19	8.53	7.47	0.13	-48.77
Last 5	12:09:35	1200.03	24.55	6.50	31511.21	6.87	7.47	0.12	-49.19
Last 5	12:14:35	1500.03	24.81	6.50	31560.58	5.39	7.47	0.11	-49.41
Last 5	12:19:35	1800.03	24.85	6.50	31606.48	3.17	7.47	0.13	-48.96
Last 5	12:24:35	2100.03	24.70	6.50	31596.02	2.84	7.47	0.12	-49.62
Variance 0			0.26	0.00	49.37			-0.00	-0.22
Variance 1			0.04	-0.00	45.90			0.01	0.45
Variance 2			-0.16	0.00	-10.46			-0.00	-0.66

Notes

Sample@1225, FB-01@1200, cloudy 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 11:18:50

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 12.43 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.17 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:57:30	1500.02	24.24	6.29	13144.57	0.51	12.60	0.14	-74.66
Last 5	11:02:30	1800.02	24.24	6.29	13135.93	0.44	12.60	0.13	-78.57
Last 5	11:07:30	2100.02	24.46	6.29	13224.81	0.39	12.60	0.13	-80.76
Last 5	11:12:30	2400.03	24.44	6.28	13204.26	0.34	12.60	0.13	-82.07
Last 5	11:17:30	2700.03	24.42	6.28	13206.27	0.39	12.60	0.13	-83.51
Variance 0			0.22	-0.00	88.89			-0.00	-2.18
Variance 1			-0.02	-0.00	-20.55			-0.00	-1.32
Variance 2			-0.02	-0.00	2.01			-0.00	-1.44

Notes

Sample@1118, Partly Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 10:01:58

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.70 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.2 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:45:09	300.03	23.52	6.25	26498.06	12.60	7.85	0.59	-43.26
Last 5	09:50:09	600.02	23.63	6.28	26671.99	8.87	7.88	0.31	-53.30
Last 5	09:55:09	900.02	23.53	6.29	26749.75	6.56	7.88	0.23	-56.51
Last 5	10:00:09	1200.02	23.43	6.29	26730.07	4.90	7.88	0.21	-57.52
Last 5									
Variance 0			0.11	0.03	173.93			-0.27	-10.04
Variance 1			-0.09	0.01	77.76			-0.08	-3.21
Variance 2			-0.10	0.00	-19.68			-0.02	-1.00

Notes

Sample@1001, Partly cloudy 84

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 09:11:01

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:49:38	300.03	24.01	6.60	8051.97	51.70	7.40	0.73	-104.66
Last 5	08:54:38	600.02	23.64	6.69	8080.67	19.80	7.40	0.30	-121.07
Last 5	08:59:38	900.02	23.51	6.75	8101.74	10.40	7.40	0.18	-128.65
Last 5	09:04:38	1200.03	23.49	6.78	8110.41	8.58	7.40	0.14	-132.27
Last 5	09:09:38	1500.03	23.51	6.80	8124.21	4.53	7.40	0.13	-133.56
Variance 0			-0.13	0.06	21.07			-0.12	-7.57
Variance 1			-0.02	0.03	8.67			-0.04	-3.62
Variance 2			0.02	0.02	13.80			-0.01	-1.29

Notes

Sample@0919, Sunny 84

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 08:15:23

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 22.9 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.25 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.25 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:53:47	600.02	22.43	6.27	13433.84	11.60	12.50	0.12	-175.25
Last 5	07:58:47	900.02	22.53	6.26	13444.96	7.28	12.50	0.10	-182.47
Last 5	08:03:47	1200.03	22.65	6.26	13459.78	6.01	12.50	0.09	-186.37
Last 5	08:08:47	1500.02	22.74	6.26	13467.19	5.15	12.50	0.09	-189.47
Last 5	08:13:47	1800.02	22.84	6.25	13480.37	4.84	12.50	0.09	-191.07
Variance 0			0.12	-0.00	14.81			-0.01	-3.90
Variance 1			0.09	-0.00	7.42			-0.00	-3.09
Variance 2			0.09	-0.00	13.18			-0.00	-1.60

Notes

Sample@0815

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-14 07:06:55

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID MW-8 APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 20.64 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.16 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:44:11	1200.02	21.86	6.64	12236.02	17.20	20.80	0.17	-130.07
Last 5	06:49:11	1500.02	21.86	6.65	12255.48	11.80	20.80	0.17	-131.81
Last 5	06:54:11	1800.02	21.90	6.65	12271.81	9.97	20.80	0.16	-133.52
Last 5	06:59:11	2100.03	21.90	6.66	12280.07	7.24	20.80	0.16	-134.79
Last 5	07:04:11	2400.02	21.94	6.66	12282.24	4.91	20.80	0.15	-136.00
Variance 0			0.04	0.00	16.33			-0.01	-1.71
Variance 1			0.00	0.00	8.25			-0.00	-1.27
Variance 2			0.04	0.00	2.18			-0.01	-1.20

Notes

Sample@0705, DUP-01@0605, Sunny 75

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-13 12:04:28

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 21.29 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:43:12	1500.05	23.65	6.17	11437.57	12.30	21.39	0.15	-41.92
Last 5	11:48:12	1800.02	23.56	6.17	11456.13	9.77	21.38	0.14	-42.23
Last 5	11:53:12	2100.02	23.50	6.18	11441.23	7.27	21.38	0.14	-42.29
Last 5	11:58:12	2400.02	23.33	6.18	11447.79	5.16	21.38	0.14	-42.15
Last 5	12:03:12	2700.02	23.33	6.18	11463.50	3.89	21.38	0.13	-42.36
Variance 0			-0.06	0.00	-14.90			-0.01	-0.06
Variance 1			-0.17	0.00	6.55			0.00	0.14
Variance 2			-0.00	0.00	15.71			-0.01	-0.21

Notes

Sample@1203, partly sunny 90

Grab Samples

Product Name: Low-Flow System

Date: 2018-06-13 10:49:27

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 383005
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 19.82 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6362198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.16 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:37:47	300.07	23.79	6.51	6127.88	2.01	19.99	0.16	-88.62
Last 5	10:42:46	600.03	23.78	6.59	6154.64	1.10	19.99	0.13	-95.56
Last 5	10:47:46	900.03	23.83	6.64	6179.62	0.89	19.99	0.12	-97.69
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.01	0.08	26.75			-0.03	-6.94
Variance 2			0.05	0.05	24.99			-0.01	-2.13

Notes

Sample@1048, Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 09:22:05

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID MW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.06 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 44 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:58:49	5401.01	23.43	6.00	6134.33	6.41	24.14	0.05	-492.23
Last 5	09:03:49	5701.01	23.43	6.00	6255.33	6.12	24.14	0.05	-501.12
Last 5	09:08:49	6001.00	23.56	6.00	6380.42	5.73	24.16	0.04	-507.70
Last 5	09:13:49	6301.00	23.61	5.99	6522.35	5.32	24.16	0.04	-512.67
Last 5	09:18:49	6601.00	23.56	5.97	6671.38	5.63	24.16	0.04	-516.45
Variance 0			0.13	0.00	125.09			-0.00	-6.58
Variance 1			0.05	-0.01	141.93			-0.00	-4.97
Variance 2			-0.05	-0.02	149.02			-0.00	-3.78

Notes

Sample time 0923. Sunny 83.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 10:41:36

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 21.46 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.3 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:19:39	900.01	23.79	6.03	8372.50	11.70	21.72	0.19	-12.47
Last 5	10:24:39	1200.01	23.72	6.03	8443.55	7.08	21.72	0.18	-19.55
Last 5	10:29:39	1500.01	23.74	6.03	8490.47	5.69	21.69	0.18	-23.48
Last 5	10:34:39	1800.01	23.74	6.03	8490.25	4.61	21.69	0.18	-25.22
Last 5	10:39:39	2100.01	23.83	6.03	8471.74	2.66	21.69	0.17	-26.43
Variance 0			0.02	-0.00	46.92			-0.00	-3.93
Variance 1			-0.00	-0.00	-0.22			-0.00	-1.74
Variance 2			0.09	0.00	-18.51			-0.00	-1.22

Notes

Sample time 1042. Sunny 87.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 11:39:49

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 31.5 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.5 ft
Screen Length 10 ft
Depth to Water 7.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.3 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:17:50	600.02	24.73	6.58	30230.42	5.23	7.70	0.22	9.24
Last 5	11:22:50	900.02	24.70	6.59	30408.09	5.49	7.72	0.15	-2.47
Last 5	11:27:50	1200.02	24.49	6.60	30215.58	3.95	7.73	0.14	-7.56
Last 5	11:32:50	1500.02	24.50	6.60	30300.39	2.87	7.74	0.15	-10.65
Last 5	11:37:50	1800.02	24.33	6.60	30303.93	1.78	7.75	0.15	-12.28
Variance 0			-0.21	0.01	-192.51			-0.01	-5.09
Variance 1			0.01	0.00	84.82			0.00	-3.09
Variance 2			-0.17	0.00	3.54			0.00	-1.63

Notes

Sample time 1140. Sunny 88.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 14:37:49

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 12.63 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.6 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:15:32	1800.02	24.51	6.32	12650.26	0.54	12.79	0.16	-33.42
Last 5	14:20:32	2100.02	24.53	6.33	12719.64	0.38	12.79	0.16	-39.94
Last 5	14:25:32	2399.96	23.93	6.33	12683.87	0.36	12.79	0.16	-44.17
Last 5	14:30:32	2699.96	24.11	6.34	12740.10	0.35	12.79	0.15	-48.56
Last 5	14:35:32	2999.96	23.97	6.34	12677.34	0.51	12.79	0.15	-52.20
Variance 0			-0.60	0.00	-35.77			0.00	-4.24
Variance 1			0.18	0.00	56.23			-0.01	-4.39
Variance 2			-0.14	0.00	-62.76			-0.00	-3.64

Notes

Sample time 1438. P/C 89.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 15:59:18

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.68 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:34:47	1500.02	23.32	6.31	26018.30	2.79	7.78	0.21	-8.60
Last 5	15:39:47	1800.02	23.63	6.32	25907.15	2.44	7.78	0.20	-13.50
Last 5	15:44:47	2100.02	23.38	6.34	25854.26	2.12	7.78	0.19	-16.61
Last 5	15:49:47	2399.94	23.34	6.34	25891.84	1.73	7.78	0.19	-18.97
Last 5	15:54:47	2699.94	23.51	6.35	25877.67	1.57	7.78	0.18	-20.83
Variance 0			-0.25	0.01	-52.89			-0.01	-3.11
Variance 1			-0.05	0.01	37.57			-0.00	-2.36
Variance 2			0.17	0.00	-14.17			-0.01	-1.86

Notes

Sample time 1559. Dup-02 fake time 1459. FB-01 sample time 1546. P/C 90.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 17:38:53

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.51 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.1 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	17:13:45	1200.02	23.29	6.59	7978.24	13.40	7.72	0.13	-106.85
Last 5	17:18:45	1500.02	23.34	6.70	7973.26	9.33	7.72	0.13	-123.12
Last 5	17:23:45	1800.02	23.28	6.77	7946.78	7.52	7.72	0.12	-131.95
Last 5	17:28:45	2100.02	23.24	6.82	7945.75	4.33	7.72	0.12	-136.80
Last 5	17:33:45	2400.02	23.25	6.85	7954.97	3.22	7.72	0.12	-139.71
Variance 0			-0.06	0.07	-26.48			-0.00	-8.83
Variance 1			-0.04	0.05	-1.03			-0.00	-4.85
Variance 2			0.01	0.03	9.22			-0.00	-2.91

Notes

Sample time 1739. P/C 90.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-24 18:57:17

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.24 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	18:35:11	1500.02	22.75	6.35	12735.62	6.59	12.90	0.13	-243.69
Last 5	18:40:11	1800.02	22.67	6.34	12713.80	6.36	12.91	0.13	-253.83
Last 5	18:45:11	2100.02	22.69	6.33	12758.72	5.77	12.92	0.13	-258.36
Last 5	18:50:11	2400.02	22.55	6.34	12780.02	5.37	12.93	0.13	-260.54
Last 5	18:55:15	2704.02	22.62	6.34	12783.81	4.85	12.94	0.13	-263.39
Variance 0			0.03	-0.00	44.92			0.00	-4.53
Variance 1			-0.14	0.00	21.29			0.00	-2.18
Variance 2			0.07	0.00	3.80			-0.00	-2.85

Notes

Sample time 1858. P/C 88.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-23 17:15:51

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 21.21 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.4 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:51:43	1500.02	23.63	6.66	11754.54	6.33	21.49	0.19	-31.72
Last 5	16:56:43	1800.02	23.66	6.68	11780.70	5.23	21.51	0.18	-41.13
Last 5	17:01:43	2100.02	23.65	6.69	11791.66	4.28	21.52	0.18	-48.27
Last 5	17:06:43	2400.02	23.65	6.69	11764.31	3.55	21.53	0.18	-53.80
Last 5	17:11:43	2700.02	23.65	6.70	11793.07	2.77	21.55	0.18	-58.21
Variance 0			-0.01	0.01	10.96			-0.00	-7.14
Variance 1			0.00	0.01	-27.35			-0.00	-5.53
Variance 2			0.00	0.00	28.76			-0.00	-4.42

Notes

Sample time 1715. Dup-01 fake time 1615. P/C 91.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-23 15:44:36

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 46 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID MW-9 APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 22.25 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6853175 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.7 in
Total Volume Pumped 32 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:21:31	3599.97	24.69	6.19	9735.16	4.92	22.46	0.18	-16.39
Last 5	15:26:31	3899.97	24.87	6.19	9737.24	6.36	22.47	0.18	-16.50
Last 5	15:31:31	4199.97	24.95	6.19	9723.48	5.68	22.49	0.17	-16.34
Last 5	15:36:31	4499.97	25.07	6.18	9712.97	5.00	22.50	0.18	-16.34
Last 5	15:41:31	4799.97	24.73	6.19	9662.40	2.79	22.52	0.17	-16.09
Variance 0			0.08	-0.00	-13.76			-0.01	0.16
Variance 1			0.12	-0.00	-10.50			0.01	-0.00
Variance 2			-0.34	0.00	-50.57			-0.01	0.25

Notes

Sample time 1545. PC 93.

Grab Samples

Product Name: Low-Flow System

Date: 2018-07-23 13:46:39

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR BG-3
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 424893
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID MW-10 APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 20.38 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6674637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.3 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:24:19	300.08	25.76	6.50	5008.16	3.15	20.75	0.64	-31.25
Last 5	13:29:19	600.02	24.48	6.63	5010.53	0.89	20.78	0.27	-54.05
Last 5	13:34:19	900.02	24.41	6.71	5166.92	0.78	20.80	0.25	-62.69
Last 5	13:39:19	1200.02	24.33	6.74	5174.78	0.56	20.81	0.24	-66.77
Last 5	13:44:19	1500.02	24.33	6.76	4928.84	0.49	20.81	0.25	-68.90
Variance 0			-0.07	0.08	156.39			-0.03	-8.64
Variance 1			-0.08	0.04	7.86			-0.00	-4.08
Variance 2			-0.00	0.02	-245.95			0.00	-2.12

Notes

Sample time 1347. Sunny 91.

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 09:00:08

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 22.91 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 34 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:36:38	3900.02	22.93	5.89	6414.00	74.60	23.05	0.23	-378.00
Last 5	08:41:38	4200.02	22.95	5.88	6461.13	24.80	23.05	0.20	-389.10
Last 5	08:46:38	4500.02	23.05	5.88	6520.98	98.10	23.05	0.19	-400.16
Last 5	08:51:38	4800.03	23.11	5.91	6568.87	13.90	23.05	0.19	-408.75
Last 5	08:56:38	5100.02	23.15	5.90	6638.25	3.69	23.05	0.18	-415.60
Variance 0			0.10	0.00	59.85			-0.01	-11.06
Variance 1			0.05	0.03	47.89			0.00	-8.59
Variance 2			0.05	-0.01	69.38			-0.01	-6.85

Notes

Sample@0859, Cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 09:51:54

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 20.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:29:46	600.02	23.18	6.37	9238.09	44.10	20.70	0.23	-188.73
Last 5	09:34:46	900.03	23.00	6.32	9283.55	24.30	20.70	0.21	-189.45
Last 5	09:39:46	1200.02	22.93	6.28	9314.35	12.40	20.70	0.20	-190.12
Last 5	09:44:46	1500.02	22.82	6.25	9331.01	7.75	20.70	0.22	-191.37
Last 5	09:49:46	1800.03	22.82	6.23	9340.31	4.65	20.70	0.23	-192.36
Variance 0			-0.07	-0.04	30.80			-0.01	-0.67
Variance 1			-0.11	-0.03	16.67			0.01	-1.25
Variance 2			-0.00	-0.02	9.30			0.02	-0.99

Notes

Sample @0951 Cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 11:06:41

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 31.5 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.5 ft
Screen Length 10 ft
Depth to Water 6.56 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:38:37	900.03	23.42	6.76	33416.82	13.60	6.80	0.17	-193.29
Last 5	10:43:37	1200.02	23.31	6.75	33443.79	10.20	6.80	0.19	-193.52
Last 5	10:48:37	1500.03	23.16	6.75	33479.91	6.92	6.80	0.19	-194.01
Last 5	10:53:37	1800.02	23.02	6.75	33481.22	5.13	6.80	0.19	-194.83
Last 5	11:03:37	2400.02	22.98	6.74	33445.21	4.46	6.80	0.19	-196.13
Variance 0			-0.15	-0.00	36.12			-0.00	-0.49
Variance 1			-0.14	-0.00	1.32			-0.00	-0.81
Variance 2			-0.04	-0.01	-36.01			-0.00	-1.30

Notes

Sample@1105, Cloudy 77, FB-1@1050

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 11:06:33

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-4
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 11.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.13 in
Total Volume Pumped 44 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:42:54	5404.02	23.64	6.29	11908.90	3.57	11.55	0.12	-172.99
Last 5	10:47:54	5704.02	23.43	6.30	11906.36	3.45	11.55	0.12	-176.13
Last 5	10:52:58	6008.02	23.16	6.31	11933.62	3.31	11.55	0.12	-178.41
Last 5	10:58:09	6319.02	23.16	6.32	11926.41	3.06	11.55	0.12	-180.08
Last 5	11:03:09	6619.02	23.16	6.33	11912.03	2.85	11.55	0.12	-181.28
Variance 0			-0.27	0.01	27.26			-0.00	-2.28
Variance 1			0.00	0.01	-7.21			-0.00	-1.67
Variance 2			-0.00	0.01	-14.38			-0.00	-1.20

Notes

Sample time @1105. Cloudy 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 12:30:05

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-4
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 6.68 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.07 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:06:12	1801.02	23.61	6.36	24511.88	5.82	6.75	0.18	-56.40
Last 5	12:11:12	2101.02	23.36	6.37	24518.09	5.40	6.75	0.18	-61.05
Last 5	12:16:12	2401.02	23.24	6.37	24532.58	4.39	6.75	0.17	-64.90
Last 5	12:21:12	2701.02	23.16	6.37	24549.62	4.00	6.75	0.17	-68.01
Last 5	12:26:13	3002.02	23.11	6.38	24495.18	3.39	6.75	0.16	-70.63
Variance 0			-0.13	0.00	14.49			-0.01	-3.85
Variance 1			-0.08	0.00	17.04			-0.00	-3.11
Variance 2			-0.05	0.00	-54.45			-0.01	-2.62

Notes

Sample time @1230. Cloudy 80.

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-06 11:07:52

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 6.47 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.2 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:47:03	300.02	23.11	6.84	7946.42	25.10	6.65	0.39	-211.21
Last 5	10:52:03	600.02	23.12	6.87	7918.07	19.30	6.65	0.24	-216.52
Last 5	10:57:03	900.02	23.11	6.89	7942.82	11.80	6.65	0.19	-218.29
Last 5	11:02:03	1200.02	23.11	6.90	7933.53	7.11	6.65	0.19	-218.43
Last 5	11:07:03	1500.02	23.20	6.91	7926.23	4.89	6.65	0.19	-217.66
Variance 0			-0.00	0.02	24.74			-0.05	-1.78
Variance 1			-0.00	0.01	-9.28			-0.01	-0.14
Variance 2			0.10	0.01	-7.30			0.00	0.78

Notes

Sample@1107, Cloudy 76

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-06 10:21:18

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 11.10 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.54 in
Total Volume Pumped 26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:55:13	2401.02	23.48	6.32	12354.77	5.67	11.64	0.14	-276.90
Last 5	10:00:13	2701.02	23.15	6.30	12347.00	5.09	11.64	0.15	-293.37
Last 5	10:10:13	3301.02	22.93	6.29	12320.84	5.35	11.64	0.15	-301.66
Last 5	10:15:13	3601.03	22.91	6.29	12386.05	5.00	11.64	0.14	-303.14
Last 5	10:20:13	3901.03	22.92	6.29	12483.35	4.49	11.64	0.15	-303.82
Variance 0			-0.23	-0.01	-26.16			-0.01	-8.28
Variance 1			-0.02	-0.00	65.21			-0.00	-1.48
Variance 2			0.01	0.01	97.29			0.00	-0.68

Notes

Sample@1020, Cloudy 76

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-06 08:57:17

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 16.95 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:35:57	1500.02	22.89	6.66	11968.42	12.30	19.20	0.37	-132.20
Last 5	08:40:57	1800.02	22.88	6.66	11969.05	8.97	19.20	0.36	-132.77
Last 5	08:45:57	2100.03	22.84	6.66	11966.13	7.12	19.20	0.36	-132.89
Last 5	08:50:57	2400.02	22.90	6.66	11960.61	6.02	19.20	0.36	-132.85
Last 5	08:55:57	2700.02	22.97	6.66	11954.38	4.44	19.20	0.35	-133.24
Variance 0			-0.04	0.00	-2.92			-0.00	-0.12
Variance 1			0.06	-0.00	-5.52			-0.00	0.04
Variance 2			0.07	0.00	-6.23			-0.01	-0.39

Notes

Sample@0856, Cloudy 79

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-06 07:30:00

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 46 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 20.57 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6853175 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:17:37	300.05	23.17	6.11	10122.51	7.21	20.58	0.40	-79.61
Last 5	07:22:37	600.03	23.13	6.12	10140.00	5.06	20.58	0.29	-82.39
Last 5	07:27:37	900.03	23.06	6.13	10146.44	4.22	20.58	0.26	-82.52
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.04	0.01	17.49			-0.11	-2.78
Variance 2			-0.07	0.01	6.43			-0.04	-0.13

Notes

Sample@0729, DUP-2@0629, Cloudy 77

Grab Samples

Product Name: Low-Flow System

Date: 2018-09-01 11:47:21

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 34 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 19.17 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6317564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:30:11	300.03	24.14	6.94	5313.23	4.33	19.22	0.21	-202.85
Last 5	11:35:11	600.03	24.25	6.93	5312.10	2.06	19.22	0.16	-206.53
Last 5	11:40:11	900.02	24.42	6.91	5311.79	1.96	19.22	0.14	-207.36
Last 5	11:45:11	1200.02	24.35	6.90	5302.48	1.77	19.22	0.13	-207.66
Last 5									
Variance 0			0.11	-0.01	-1.13			-0.05	-3.68
Variance 1			0.17	-0.02	-0.32			-0.02	-0.83
Variance 2			-0.07	-0.01	-9.31			-0.01	-0.30

Notes

Sample@1146, DUP-1 @1046, Cloudy 78

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-01 10:32:45

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 23.8 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:18:23	300.06	25.84	5.91	4481.20	10.30	24.10	0.12	-100.81
Last 5	10:23:23	600.03	25.82	5.91	4454.30	4.17	24.10	0.11	-95.23
Last 5	10:28:23	900.03	25.91	5.92	4404.46	3.34	24.10	0.10	-91.66
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.03	0.00	-26.90			-0.01	5.58
Variance 2			0.09	0.01	-49.84			-0.01	3.56

Notes

Sample@1031, Sunny 84

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-01 11:56:49

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BG-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 21.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.8 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:34:21	1500.03	25.37	5.94	8278.14	9.76	22.30	0.20	-65.29
Last 5	11:39:21	1800.02	25.77	5.94	8317.71	7.23	22.30	0.20	-65.86
Last 5	11:44:21	2100.02	25.78	5.94	8308.39	5.86	22.30	0.20	-65.39
Last 5	11:49:21	2400.67	25.68	5.94	8341.20	4.58	22.30	0.20	-64.89
Last 5	11:54:21	2700.03	25.64	5.94	8344.32	4.32	22.30	0.20	-64.18
Variance 0			0.01	0.00	-9.32			-0.00	0.47
Variance 1			-0.09	-0.00	32.81			-0.00	0.49
Variance 2			-0.05	0.00	3.12			0.00	0.71

Notes

Sample@1155, Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-01 12:54:53

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BG-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 36.5 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.5 ft
Screen Length 10 ft
Depth to Water 7.44 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.7 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:33:11	300.07	24.82	6.48	29706.75	7.23	8.10	0.19	-30.66
Last 5	12:38:11	600.03	24.52	6.51	29546.75	5.11	8.10	0.15	-45.65
Last 5	12:43:11	900.02	24.60	6.51	29506.74	4.18	8.10	0.14	-52.43
Last 5	12:48:11	1200.02	24.55	6.51	29440.23	4.05	8.10	0.14	-55.93
Last 5	12:53:11	1500.02	24.53	6.51	29481.36	3.98	8.10	0.14	-57.68
Variance 0			0.07	0.00	-40.01			-0.02	-6.78
Variance 1			-0.04	0.00	-66.50			-0.00	-3.50
Variance 2			-0.02	-0.00	41.13			0.00	-1.75

Notes

Sample@1254, Sunny 87

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-01 13:57:18

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BG-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 12.03 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.5 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:34:56	900.02	24.50	6.38	13095.99	1.56	12.55	0.14	-99.57
Last 5	13:39:56	1200.02	24.45	6.39	13120.47	1.23	12.55	0.13	-115.25
Last 5	13:44:56	1500.03	24.30	6.39	13136.28	1.09	12.55	0.13	-123.79
Last 5	13:49:56	1800.03	24.25	6.38	13174.09	1.01	12.55	0.12	-129.88
Last 5	13:54:56	2100.03	24.23	6.36	13102.92	0.89	12.55	0.12	-133.20
Variance 0			-0.15	-0.00	15.81			-0.01	-8.54
Variance 1			-0.05	-0.01	37.81			-0.01	-6.09
Variance 2			-0.02	-0.01	-71.17			0.00	-3.32

Notes

Sample @1356, DUP@ 1256, Sunny 87

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 16:12:05

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BG-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.43 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:49:47	600.02	38.79	6.88	5418.54	10.80	7.55	6.26	-193.03
Last 5	15:54:47	900.02	24.41	6.66	25607.45	5.58	7.55	0.64	-195.51
Last 5	15:59:47	1200.02	23.79	6.58	26222.49	4.79	7.55	0.34	-201.28
Last 5	16:04:47	1500.02	23.72	6.53	26209.84	4.36	7.55	0.23	-206.38
Last 5	16:09:47	1800.03	23.71	6.47	26264.23	4.20	7.55	0.21	-209.45
Variance 0			-0.62	-0.08	615.04			-0.30	-5.77
Variance 1			-0.07	-0.06	-12.65			-0.11	-5.10
Variance 2			-0.01	-0.05	54.38			-0.03	-3.07

Notes

Sample @1611, FB-1@1545, Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 15:15:30

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.15 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:54:31	600.03	25.00	6.92	8029.39	4.67	7.25	0.12	-230.86
Last 5	14:59:31	900.03	24.54	6.93	7995.66	2.77	7.25	0.10	-233.91
Last 5	15:04:31	1200.03	24.67	6.94	8031.62	2.25	7.25	0.09	-235.18
Last 5	15:09:31	1500.04	24.80	6.94	8019.09	2.16	7.25	0.09	-235.50
Last 5	15:14:31	1800.03	24.78	6.94	8019.08	2.02	7.25	0.08	-235.28
Variance 0			0.13	0.00	35.96			-0.01	-1.26
Variance 1			0.13	0.00	-12.53			-0.00	-0.32
Variance 2			-0.02	-0.00	-0.02			-0.00	0.22

Notes

Sample @1515, Sunny 86

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 14:20:45

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Pond SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW -7 *25ft*
Well diameter 2 in
Well Total Depth 36.4 ft
Screen Length 10 ft
Depth to Water 11.83 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Fast 5	13:58:06	3301.02	23.96	6.28	11264.35	8.41	12.10	0.07	-305.68
Fast 5	14:03:06	3601.02	24.01	6.28	11264.91	8.17	12.10	0.07	-306.89
Fast 5	14:08:09	3904.02	23.98	6.28	11211.93	7.44	12.10	0.07	-307.97
Fast 5	14:13:09	4204.02	24.05	6.28	11415.98	5.85	12.10	0.07	-308.70
Fast 5	14:18:09	4504.03	24.10	6.28	11364.83	4.94	12.10	0.08	-309.51
Variance 0			-0.03	-0.00	-52.98			0.00	-1.07
Variance 1			0.07	-0.00	204.05			-0.00	-0.74
Variance 2			0.05	0.00	-51.16			0.00	-0.80

Notes

Sample@1420, Sunny 89

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 12:29:31

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BG-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 20.63 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:05:33	900.02	24.80	6.63	11343.55	1.27	20.65	0.22	-115.02
Last 5	12:10:33	1200.02	24.69	6.63	11378.96	1.00	20.65	0.20	-119.48
Last 5	12:15:33	1500.02	24.49	6.63	11373.68	1.16	20.65	0.19	-121.64
Last 5	12:20:33	1800.03	24.46	6.63	11436.29	1.29	20.65	0.17	-123.61
Last 5	12:25:33	2100.02	24.78	6.63	11457.52	1.14	20.65	0.17	-125.58
Variance 0			-0.20	-0.00	-5.28			-0.00	-2.16
Variance 1			-0.03	-0.00	62.61			-0.02	-1.97
Variance 2			0.32	0.00	21.23			-0.00	-1.97

Notes

Sample@1229, Sunny 88

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 11:26:09

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BK-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 21.86 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.2 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:04:40	300.03	25.59	6.15	9977.09	12.90	22.00	0.39	-48.56
Last 5	11:09:40	600.02	25.25	6.13	10077.39	7.35	22.00	0.25	-48.31
Last 5	11:14:40	900.03	25.41	6.13	10139.97	3.12	22.00	0.21	-48.36
Last 5	11:19:40	1200.03	25.59	6.13	10141.61	2.58	22.00	0.19	-48.80
Last 5	11:24:40	1500.03	25.43	6.13	10158.68	2.39	22.00	0.18	-48.69
Variance 0			0.16	-0.00	62.58			-0.05	-0.05
Variance 1			0.18	-0.00	1.64			-0.02	-0.44
Variance 2			-0.16	0.01	17.08			-0.01	0.11

Notes

Sample@1125, Sunny 87

Grab Samples

Product Name: Low-Flow System

Date: 2018-10-02 10:32:11

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR BK-5
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 20.08 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6362198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:09:39	300.07	24.77	6.61	5166.94	1.48	20.35	0.19	-114.75
Last 5	10:14:39	600.03	24.71	6.69	5228.34	1.24	20.36	0.12	-122.72
Last 5	10:19:39	900.02	24.64	6.73	5243.78	1.09	20.36	0.11	-127.04
Last 5	10:24:39	1200.01	24.50	6.75	5256.00	0.79	20.36	0.10	-128.59
Last 5	10:29:39	1500.02	24.61	6.77	5082.85	0.88	20.30	0.10	-130.60
Variance 0			-0.07	0.04	15.44			-0.02	-4.32
Variance 1			-0.14	0.02	12.22			-0.01	-1.56
Variance 2			0.11	0.02	-173.15			-0.00	-2.01

Notes

Sample@1031, DUP-2 @0931, Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 14:20:33

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.23 in
Total Volume Pumped 40 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:57:53	4803.03	25.42	6.04	5448.22	3.07	24.60	0.02	-513.11
Last 5	14:02:53	5103.03	25.41	6.04	5492.26	3.10	24.60	0.02	-519.47
Last 5	14:07:53	5403.03	25.21	6.04	5512.43	3.05	24.60	0.02	-525.45
Last 5	14:12:53	5703.03	25.28	6.04	5548.90	3.05	24.60	0.02	-530.60
Last 5	14:17:53	6003.03	25.41	6.03	5583.90	3.07	24.60	0.02	-534.03
Variance 0			-0.20	-0.00	20.17			-0.00	-5.99
Variance 1			0.07	-0.00	36.47			0.00	-5.15
Variance 2			0.12	-0.01	35.00			-0.00	-3.42

Notes

Sample time @1420. PC 65.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 12:11:12

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 22.27 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:58:31	300.02	25.06	5.96	7751.45	1.95	22.35	0.26	-34.98
Last 5	12:03:31	600.03	25.17	5.98	7784.77	1.84	22.35	0.17	-40.62
Last 5	12:08:31	900.03	25.05	5.99	7834.86	1.55	22.35	0.14	-42.44
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.12	0.02	33.32			-0.09	-5.64
Variance 2			-0.12	0.00	50.09			-0.03	-1.82

Notes

Sample time @1210. PC 62.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 15:41:07

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 31.45 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.45 ft
Screen Length 10 ft
Depth to Water 8.30 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:18:55	2401.03	25.28	6.74	29211.98	1.46	8.40	0.12	-239.01
Last 5	15:23:55	2701.03	25.11	6.72	29250.97	1.27	8.40	0.12	-240.28
Last 5	15:28:55	3001.03	25.42	6.71	29106.25	1.25	8.40	0.12	-241.10
Last 5	15:33:55	3301.03	25.47	6.70	29093.64	1.20	8.40	0.12	-241.56
Last 5	15:38:55	3601.03	25.35	6.69	29101.98	1.14	8.40	0.12	-241.72
Variance 0			0.31	-0.01	-144.72			-0.01	-0.82
Variance 1			0.06	-0.01	-12.62			-0.00	-0.47
Variance 2			-0.12	-0.01	8.35			0.01	-0.16

Notes

Sample time @1545. Sunny 65.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 11:23:33

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 32.05 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.05 ft
Screen Length 10 ft
Depth to Water 12.35 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:00:20	2100.02	24.33	6.41	12014.87	0.78	12.40	0.15	-103.31
Last 5	11:05:20	2400.02	24.33	6.41	12010.50	0.75	12.40	0.15	-108.61
Last 5	11:10:21	2701.03	24.55	6.40	11987.28	0.70	12.40	0.14	-114.19
Last 5	11:15:21	3001.02	24.60	6.40	11983.97	0.67	12.40	0.14	-119.25
Last 5	11:20:21	3301.02	24.54	6.39	12009.04	0.66	12.40	0.14	-122.93
Variance 0			0.22	-0.00	-23.22			-0.01	-5.58
Variance 1			0.05	-0.01	-3.31			-0.00	-5.05
Variance 2			-0.06	-0.01	25.08			0.00	-3.68

Notes

Sample time @ 1123. PC 60.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 09:58:16

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.30 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:35:38	900.02	22.98	6.40	24789.04	2.14	7.35	0.22	-48.22
Last 5	09:40:38	1200.02	22.74	6.40	24781.77	1.89	7.35	0.21	-48.19
Last 5	09:45:38	1500.02	22.89	6.41	24726.93	1.65	7.35	0.20	-47.92
Last 5	09:50:38	1800.02	22.98	6.41	24788.80	1.31	7.35	0.19	-47.93
Last 5	09:55:38	2100.02	22.80	6.40	24805.05	1.14	7.35	0.19	-47.22
Variance 0			0.16	0.00	-54.84			-0.01	0.27
Variance 1			0.09	-0.00	61.87			-0.01	-0.01
Variance 2			-0.17	-0.00	16.25			-0.00	0.71

Notes

Sample time @ 1000. PC 60. Field blank 2 @ 1003.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 08:46:56

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 6.97 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7031711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:24:31	600.02	23.80	6.99	7525.47	3.46	7.05	0.15	-141.19
Last 5	08:29:31	900.02	23.30	7.02	7586.93	3.05	7.05	0.13	-145.36
Last 5	08:34:31	1200.02	23.79	7.04	7493.95	2.70	7.05	0.12	-147.95
Last 5	08:39:31	1500.07	23.84	7.05	7503.31	1.65	7.05	0.11	-149.97
Last 5	08:44:31	1800.03	23.70	7.06	7505.24	1.59	7.05	0.11	-150.09
Variance 0			0.49	0.02	-92.97			-0.01	-2.59
Variance 1			0.05	0.01	9.36			-0.00	-2.02
Variance 2			-0.14	0.01	1.93			-0.00	-0.13

Notes

Sample time @ 0845. PC 56. Duplicate 2 @ 0745.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-02 07:51:26

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 11.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.4 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:33:19	300.02	24.06	6.40	11558.83	5.68	12.05	0.15	-139.94
Last 5	07:38:19	600.02	23.85	6.38	11636.28	5.13	12.05	0.14	-144.16
Last 5	07:43:19	900.02	23.84	6.38	11666.42	4.69	12.05	0.13	-145.79
Last 5	07:48:19	1200.02	23.97	6.38	11639.83	4.50	12.05	0.13	-145.86
Last 5									
Variance 0			-0.21	-0.01	77.45			-0.02	-4.22
Variance 1			-0.02	-0.00	30.14			-0.00	-1.63
Variance 2			0.13	-0.00	-26.59			0.00	-0.07

Notes

Sample time @0750. PC 55.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-01 16:30:00

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 19.94 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7031711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.31 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:16:44	300.02	25.05	6.65	11053.01	1.48	20.25	0.27	-80.50
Last 5	16:21:44	600.02	25.05	6.71	11117.08	1.49	20.25	0.20	-86.01
Last 5	16:26:44	900.02	24.99	6.74	11158.84	1.44	20.25	0.19	-88.98
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.06	64.06			-0.07	-5.51
Variance 2			-0.06	0.03	41.76			-0.02	-2.97

Notes

Sample time @1630. Cloudy 72. Field blank @ 1635.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-01 15:37:48

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-6
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 22.10 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:14:14	901.02	24.81	6.17	8932.10	3.05	22.15	0.14	-30.19
Last 5	15:19:14	1201.02	25.44	6.18	8967.80	2.70	22.15	0.12	-30.84
Last 5	15:24:14	1501.02	25.23	6.18	9045.12	2.56	22.15	0.12	-30.98
Last 5	15:29:14	1801.02	25.24	6.19	9090.03	2.27	22.15	0.11	-31.53
Last 5	15:34:14	2101.02	25.31	6.19	9107.45	2.18	22.15	0.11	-31.87
Variance 0			-0.21	0.00	77.32			-0.00	-0.15
Variance 1			0.01	0.01	44.91			-0.00	-0.55
Variance 2			0.08	0.00	17.41			-0.01	-0.34

Notes

Sample time @ 1537. Cloudy 75. Duplicate 1 @ 1437.

Grab Samples

Product Name: Low-Flow System

Date: 2018-11-01 14:18:38

Project Information:

Operator Name Philip Evans
Company Name RDH environmental
Project Name Plant Watson CCR BG-4
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 19.83 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.22 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:56:06	900.02	26.44	6.77	4643.46	1.20	20.05	0.15	-79.06
Last 5	14:01:06	1200.01	26.24	6.80	4655.10	1.15	20.05	0.14	-79.42
Last 5	14:06:06	1500.02	26.60	6.83	4637.18	1.18	20.05	0.14	-79.28
Last 5	14:11:06	1800.02	26.65	6.84	4639.94	1.13	20.05	0.14	-79.20
Last 5	14:16:06	2100.02	26.77	6.86	4633.89	1.08	20.05	0.13	-79.46
Variance 0			0.36	0.02	-17.93			-0.00	0.14
Variance 1			0.04	0.02	2.76			-0.00	0.08
Variance 2			0.12	0.02	-6.05			-0.00	-0.26

Notes

Sample time @1420. Cloudy 75.

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 10:05:53

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 21.95 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6362198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.33 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:44:31	300.09	22.44	6.74	5414.09	1.69	22.25	0.22	-95.32
Last 5	09:49:31	600.03	22.34	6.79	5415.78	1.13	22.27	0.17	-96.98
Last 5	09:54:31	900.02	22.55	6.84	5447.63	1.07	22.28	0.16	-98.70
Last 5	09:59:31	1200.02	22.66	6.86	5455.35	1.15	22.28	0.15	-99.66
Last 5	10:04:31	1500.02	22.61	6.89	5450.88	1.19	22.28	0.14	-99.66
Variance 0			0.21	0.04	31.85			-0.02	-1.72
Variance 1			0.11	0.03	7.72			-0.01	-0.96
Variance 2			-0.04	0.03	-4.47			-0.01	-0.00

Notes

Sample@1005, Sunny 47

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 11:01:53

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 27.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 23.23 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6763906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:43:05	300.03	20.34	6.23	11156.86	2.35	23.23	0.26	-43.61
Last 5	10:48:05	600.02	20.50	6.24	11106.60	2.09	23.23	0.20	-44.71
Last 5	10:53:05	900.03	20.39	6.25	11100.51	1.95	23.23	0.18	-44.58
Last 5	10:58:05	1200.02	20.48	6.25	11102.21	1.62	23.23	0.18	-44.27
Last 5									
Variance 0			0.16	0.01	-50.26			-0.06	-1.10
Variance 1			-0.11	0.00	-6.09			-0.01	0.13
Variance 2			0.09	0.00	1.70			-0.00	0.31

Notes

Sample@1101, DUP-01@1001, Sunny 51

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 12:10:54

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 21.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:52:50	300.02	20.98	6.67	12990.84	1.17	21.53	0.45	-104.81
Last 5	11:57:50	600.03	21.14	6.70	13098.17	0.92	21.53	0.26	-114.79
Last 5	12:02:50	900.02	21.11	6.73	13220.53	0.84	21.53	0.22	-121.17
Last 5	12:07:50	1200.02	21.08	6.75	13273.48	0.61	21.53	0.20	-124.23
Last 5									
Variance 0			0.16	0.03	107.33			-0.19	-9.98
Variance 1			-0.03	0.03	122.36			-0.04	-6.39
Variance 2			-0.03	0.02	52.95			-0.02	-3.05

Notes

Sample@1210, Sunny 55

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 13:34:11

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.23 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:58:36	900.02	20.66	6.40	14588.72	3.60	12.62	0.12	-206.06
Last 5	13:03:36	1200.02	20.34	6.40	14579.65	3.57	12.64	0.13	-211.63
Last 5	13:08:36	1500.02	20.23	6.40	14678.22	3.43	12.65	0.14	-217.46
Last 5	13:13:36	1800.02	20.12	6.40	14568.73	3.17	12.65	0.14	-221.63
Last 5	13:18:36	2100.01	20.08	6.40	14680.07	2.84	12.65	0.15	-226.16
Variance 0			-0.11	-0.00	98.58			0.01	-5.82
Variance 1			-0.12	0.00	-109.49			-0.00	-4.17
Variance 2			-0.03	-0.00	111.34			0.01	-4.53

Notes

Sample @1319 partly cloudy 54

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 14:16:58

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.61 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.01 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:55:40	300.02	20.01	6.96	8963.67	7.27	7.62	0.59	-139.45
Last 5	14:00:40	600.02	20.08	7.04	8908.88	6.14	7.62	0.26	-155.28
Last 5	14:05:40	900.02	20.05	7.08	8923.86	4.79	7.62	0.19	-163.28
Last 5	14:10:40	1200.04	20.05	7.09	8902.54	3.11	7.62	0.17	-167.28
Last 5	14:15:40	1500.03	20.11	7.10	8893.07	2.33	7.62	0.16	-169.97
Variance 0			-0.03	0.03	14.98			-0.08	-8.00
Variance 1			0.01	0.01	-21.32			-0.02	-3.99
Variance 2			0.05	0.01	-9.47			-0.01	-2.69

Notes

Sample @1416, partly cloudy 55

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 15:06:26

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.92 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:49:07	300.02	19.58	6.37	29179.12	6.88	7.94	0.81	-71.08
Last 5	14:54:07	600.02	19.90	6.41	29190.94	3.08	7.94	0.37	-80.75
Last 5	14:59:07	900.03	19.81	6.42	29320.40	1.74	7.94	0.28	-83.05
Last 5	15:04:07	1200.02	19.90	6.42	29345.73	1.55	7.94	0.25	-82.93
Last 5									
Variance 0			0.31	0.04	11.81			-0.44	-9.67
Variance 1			-0.08	0.01	129.47			-0.09	-2.29
Variance 2			0.09	-0.00	25.33			-0.03	0.12

Notes

Sample@1506, partly cloudy 51

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-06 16:24:52

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.1 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.1 ft
Screen Length 10 ft
Depth to Water 12.96 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.04 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	16:02:55	1500.02	20.03	6.43	14170.83	0.87	13.00	0.24	-89.26
Last 5	16:07:55	1800.02	19.98	6.43	14207.06	0.94	13.00	0.24	-97.77
Last 5	16:12:55	2100.02	19.94	6.44	14158.95	0.76	13.00	0.24	-103.80
Last 5	16:17:55	2400.02	19.95	6.43	14213.91	0.91	13.00	0.24	-108.82
Last 5	16:22:55	2700.02	20.03	6.43	14181.44	0.83	13.00	0.24	-112.83
Variance 0			-0.04	0.00	-48.11			-0.00	-6.02
Variance 1			0.01	-0.00	54.96			0.00	-5.03
Variance 2			0.08	0.00	-32.46			-0.00	-4.00

Notes

Sample@1624 , partly cloudy 53

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-07 06:49:40

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 8.86 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.09 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	06:38:05	300.03	21.80	6.56	35461.78	3.13	8.92	0.13	-36.55
Last 5	06:43:05	600.02	21.72	6.55	35509.35	2.88	8.96	0.13	-33.21
Last 5	06:48:05	900.03	21.72	6.55	35528.23	2.43	8.96	0.13	-31.67
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.08	-0.00	47.57			0.00	3.35
Variance 2			0.00	-0.00	18.88			0.00	1.54

Notes

Sample@0649, partly cloudy 50

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-07 07:35:02

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 23.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7031711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:13:21	600.02	21.32	5.99	9657.16	2.27	23.77	0.10	-33.87
Last 5	07:18:21	900.02	21.32	5.99	9736.34	1.91	23.79	0.09	-36.04
Last 5	07:23:21	1200.03	21.31	5.99	9707.21	1.74	23.80	0.09	-36.12
Last 5	07:28:21	1500.03	21.32	5.98	9752.97	1.63	23.80	0.10	-35.91
Last 5	07:33:21	1800.03	21.30	5.98	9780.07	1.42	23.80	0.10	-35.57
Variance 0			-0.01	-0.01	-29.13			0.00	-0.08
Variance 1			0.01	-0.00	45.76			0.01	0.21
Variance 2			-0.02	-0.00	27.10			-0.00	0.34

Notes

Sample@0734, DUP-02@0634, Partly cloudy 51

Grab Samples

Product Name: Low-Flow System

Date: 2018-12-07 08:24:01

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 25.54 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.16 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:10:40	300.03	21.23	6.00	5585.92	3.86	25.69	0.07	-39.87
Last 5	08:15:40	600.02	21.09	6.01	5589.11	3.35	25.70	0.06	-41.43
Last 5	08:20:40	900.02	21.10	6.01	5598.86	3.13	25.70	0.06	-42.50
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.14	0.00	3.19			-0.01	-1.56
Variance 2			0.01	0.00	9.74			0.00	-1.07

Notes

Sample @0823, FB-01@0845, partly cloudy 52

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 07:45:46

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 35 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 21.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6362198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:19:01	300.07	20.20	6.70	5661.12	1.68	21.40	0.49	-84.76
Last 5	07:24:01	600.03	20.59	6.74	5703.87	1.45	21.40	0.30	-87.68
Last 5	07:34:21	300.03	20.83	6.78	5768.23	1.68	21.40	0.22	-88.37
Last 5	07:39:21	600.03	20.77	6.79	5783.99	1.45	21.40	0.22	-87.76
Last 5	07:44:21	900.02	20.89	6.81	5789.61	1.32	21.40	0.21	-87.77
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.07	0.02	15.77			-0.00	0.61
Variance 2			0.13	0.01	5.62			-0.01	-0.01

Notes

Sample@0745, DUP-01@0645, Sunny 39

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 08:45:46

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 43 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 22.7 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6719272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:23:28	300.02	18.96	6.17	12140.54	12.10	22.75	0.47	-33.69
Last 5	08:28:28	600.03	19.40	6.22	12121.81	8.32	22.75	0.26	-38.63
Last 5	08:33:28	900.02	19.54	6.23	12146.85	3.56	22.75	0.21	-40.76
Last 5	08:38:28	1200.02	19.61	6.24	12131.98	3.08	22.75	0.20	-40.95
Last 5	08:43:28	1500.03	19.60	6.24	12137.10	2.85	22.75	0.20	-40.82
Variance 0			0.13	0.01	25.04			-0.06	-2.13
Variance 1			0.07	0.01	-14.88			-0.01	-0.19
Variance 2			-0.00	0.00	5.12			0.00	0.13

Notes

Sample@0845, Sunny 45

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 09:39:02

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 21.28 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:16:58	300.02	19.01	6.57	13727.04	1.71	21.35	1.23	-74.88
Last 5	09:21:58	600.03	19.50	6.63	13996.33	1.55	21.35	0.65	-90.83
Last 5	09:26:58	900.03	19.50	6.67	14183.45	1.36	21.35	0.44	-100.93
Last 5	09:31:58	1200.02	19.50	6.69	14273.96	1.32	21.35	0.38	-106.77
Last 5	09:36:58	1500.02	19.59	6.70	14358.24	1.19	21.35	0.33	-110.44
Variance 0			-0.00	0.04	187.12			-0.22	-10.10
Variance 1			0.00	0.02	90.51			-0.06	-5.83
Variance 2			0.08	0.01	84.28			-0.04	-3.67

Notes

Sample@0938, Sunny 51

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 10:46:30

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 39 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.26 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6540735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.14 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:25:17	900.02	19.32	6.38	16398.80	2.11	12.40	0.19	-193.58
Last 5	10:30:17	1200.02	19.42	6.38	16304.90	1.93	12.40	0.18	-199.38
Last 5	10:35:17	1500.02	19.36	6.37	16361.18	1.79	12.40	0.18	-204.88
Last 5	10:40:17	1800.03	19.41	6.37	16426.32	1.87	12.40	0.19	-210.44
Last 5	10:45:17	2100.02	19.37	6.37	16374.91	1.81	12.40	0.18	-214.17
Variance 0			-0.06	-0.01	56.28			0.00	-5.50
Variance 1			0.05	-0.00	65.14			0.01	-5.56
Variance 2			-0.03	0.00	-51.42			-0.01	-3.73

Notes

Sample @1046, Sunny 55

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 11:46:22

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 38 ft

Pump placement from TOC 30.5 ft

Well Information:

Well ID APMW-6
Well diameter 2 in
Well Total Depth 35.5 ft
Screen Length 10 ft
Depth to Water 7.44 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6496101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:24:23	600.02	20.74	7.06	9443.14	8.96	7.50	0.29	-157.76
Last 5	11:29:23	900.02	20.86	7.07	9467.41	6.32	7.50	0.22	-162.77
Last 5	11:34:23	1200.02	21.01	7.08	9502.00	5.62	7.50	0.19	-166.13
Last 5	11:39:23	1500.03	20.96	7.08	9522.89	5.12	7.50	0.18	-167.69
Last 5	11:44:23	1800.03	20.97	7.08	9498.75	4.96	7.50	0.17	-168.74
Variance 0			0.15	0.00	34.58			-0.03	-3.36
Variance 1			-0.05	0.00	20.89			-0.01	-1.56
Variance 2			0.01	0.00	-24.14			-0.02	-1.05

Notes

Sample@1145, Sunny 57

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 14:14:00

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.73 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.12 in
Total Volume Pumped 30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:52:02	3300.02	22.40	6.01	5821.77	2.45	24.85	0.05	-313.45
Last 5	13:57:02	3600.02	22.44	6.01	5869.58	2.22	24.85	0.04	-364.81
Last 5	14:02:02	3900.04	22.46	6.02	5902.59	2.18	24.85	0.04	-388.98
Last 5	14:07:02	4200.02	22.44	6.01	5936.27	2.10	24.85	0.04	-404.15
Last 5	14:12:02	4500.02	22.40	6.01	5976.97	1.97	24.85	0.03	-420.48
Variance 0			0.02	0.01	33.01			-0.00	-24.18
Variance 1			-0.02	-0.01	33.68			-0.00	-15.17
Variance 2			-0.04	0.00	40.70			-0.00	-16.33

Notes

Sample@1413, Sunny 65

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 08:23:58

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.72 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	07:59:54	1800.02	21.86	6.39	27768.41	0.95	7.75	0.16	-6.55
Last 5	08:04:54	2100.02	22.02	6.40	27929.85	0.86	7.75	0.17	-11.05
Last 5	08:09:54	2400.02	22.22	6.41	27891.11	0.71	7.75	0.16	-14.73
Last 5	08:14:54	2700.02	22.36	6.42	27827.73	0.70	7.75	0.16	-17.88
Last 5	08:19:54	3000.02	22.38	6.42	27846.88	0.68	7.75	0.16	-20.40
Variance 0			0.21	0.01	-38.74			-0.00	-3.68
Variance 1			0.13	0.01	-63.37			-0.00	-3.14
Variance 2			0.02	0.01	19.15			-0.00	-2.52

Notes

Sample time @ 0825. Sunny 45. FB-01 @ 0820.

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 11:08:21

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 32.05 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.05 ft
Screen Length 10 ft
Depth to Water 12.97 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.02 in
Total Volume Pumped 52 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:45:21	6600.02	23.36	6.48	12995.11	0.82	12.99	0.12	-172.56
Last 5	10:50:22	6901.02	23.45	6.48	13016.96	0.79	12.99	0.12	-177.57
Last 5	10:55:22	7201.02	23.52	6.48	13032.37	0.69	12.99	0.12	-182.81
Last 5	11:00:22	7501.02	23.54	6.48	13040.55	0.64	12.99	0.12	-187.94
Last 5	11:05:22	7801.02	23.37	6.48	13021.42	0.60	12.99	0.12	-192.33
Variance 0			0.07	-0.00	15.41			-0.00	-5.24
Variance 1			0.02	-0.00	8.19			-0.00	-5.13
Variance 2			-0.17	0.00	-19.14			-0.00	-4.39

Notes

Sample time @ 1110. Sunny 50.

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 12:36:00

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 31.45 ft

Pump placement from TOC 40 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.45 ft
Screen Length 10 ft
Depth to Water 8.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6203746 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:13:23	1200.02	24.34	6.69	32787.11	2.66	8.40	0.13	-4.00
Last 5	12:18:23	1500.02	24.51	6.69	32635.13	2.70	8.40	0.13	-11.12
Last 5	12:23:23	1800.02	24.51	6.68	32596.95	2.72	8.40	0.12	-16.85
Last 5	12:28:23	2100.02	24.57	6.69	32648.80	2.70	8.40	0.12	-21.82
Last 5	12:33:23	2400.02	24.58	6.69	32591.53	2.75	8.40	0.12	-26.22
Variance 0			-0.00	-0.00	-38.18			-0.00	-5.74
Variance 1			0.06	0.00	51.85			-0.00	-4.97
Variance 2			0.01	0.00	-57.27			-0.00	-4.40

Notes

Sample time @ 1240. Sunny 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-02-13 13:50:29

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 22.45 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:29:12	900.02	24.92	6.08	8865.31	1.60	22.50	0.13	-37.66
Last 5	13:34:12	1200.02	24.87	6.09	8921.94	0.95	22.50	0.12	-46.85
Last 5	13:39:12	1500.02	24.92	6.09	8947.38	0.93	22.50	0.12	-52.77
Last 5	13:44:12	1800.02	25.03	6.09	8941.54	0.91	22.50	0.12	-57.22
Last 5	13:49:13	2101.02	25.01	6.09	8933.67	0.86	22.50	0.12	-60.52
Variance 0			0.05	0.00	25.44			-0.00	-5.92
Variance 1			0.12	-0.00	-5.83			-0.00	-4.45
Variance 2			-0.03	-0.00	-7.87			0.00	-3.31

Notes

Sample time @ 1355. Sunny 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-05 09:34:23

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 632615
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 42 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 23.81 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6674637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 34 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:10:23	3900.02	22.30	6.13	6392.21	2.72	24.15	0.03	-492.56
Last 5	09:15:23	4200.02	22.35	6.14	6502.61	2.49	24.14	0.03	-502.59
Last 5	09:20:23	4500.02	22.31	6.14	6605.64	2.70	24.14	0.03	-508.81
Last 5	09:25:23	4800.02	22.39	6.14	6729.87	2.99	24.14	0.03	-513.35
Last 5	09:30:23	5100.02	22.40	6.14	6857.68	3.02	24.14	0.03	-517.99
Variance 0			-0.03	-0.00	103.03			-0.00	-6.23
Variance 1			0.07	-0.00	124.23			-0.00	-4.53
Variance 2			0.01	0.00	127.81			0.00	-4.65

Notes

Sample time 0934. Cloudy 65.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-05 11:03:47

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 632615
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 47 ft

Pump placement from TOC 37.9 ft

Well Information:

Well ID APMW-2
Well diameter 2 in
Well Total Depth 42.9 ft
Screen Length 10 ft
Depth to Water 21.58 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6897809 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:37:47	2400.02	21.91	6.03	8294.94	4.21	21.86	0.14	-191.68
Last 5	10:42:47	2700.02	21.87	6.03	8297.13	3.33	21.86	0.14	-191.80
Last 5	10:47:47	3000.02	21.91	6.03	8282.96	2.99	21.85	0.13	-191.60
Last 5	10:52:47	3300.02	21.98	6.03	8282.25	2.77	21.85	0.13	-191.60
Last 5	10:57:47	3600.02	21.97	6.03	8269.68	1.92	21.85	0.13	-191.51
Variance 0			0.04	-0.00	-14.17			-0.00	0.20
Variance 1			0.07	-0.00	-0.71			-0.00	0.01
Variance 2			-0.01	-0.00	-12.58			-0.00	0.08

Notes

Sample time 1104. Dup-03 fake sample time 1004. Cloudy 72.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-05 13:01:38

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 632615
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 41 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-3
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.43 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6630003 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:40:10	4200.02	21.91	6.69	29537.54	3.44	7.59	0.12	-179.42
Last 5	12:45:10	4500.02	21.85	6.70	29519.04	3.04	7.58	0.12	-178.43
Last 5	12:50:10	4800.02	21.83	6.70	29546.84	2.93	7.56	0.12	-177.43
Last 5	12:55:10	5100.02	21.82	6.70	29531.00	2.40	7.55	0.12	-176.39
Last 5	13:00:11	5401.02	21.81	6.70	29493.39	1.98	7.54	0.12	-175.29
Variance 0			-0.02	0.00	27.80			-0.00	1.00
Variance 1			-0.01	-0.00	-15.84			0.00	1.04
Variance 2			-0.01	0.00	-37.61			0.00	1.10

Notes

Sample time 1302. Cloudy 74.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-05 08:34:31

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 32.05 ft

Well Information:

Well ID APMW-4
Well diameter 2 in
Well Total Depth 37.05 ft
Screen Length 10 ft
Depth to Water 12.17 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:10:25	1500.05	23.60	6.30	10576.23	2.10	12.25	0.14	-123.85
Last 5	08:15:25	1800.05	23.61	6.31	10581.31	1.96	12.25	0.14	-131.58
Last 5	08:20:25	2100.05	23.67	6.32	10596.61	1.95	12.25	0.14	-137.71
Last 5	08:25:25	2400.05	23.74	6.32	10594.76	1.88	12.25	0.13	-142.47
Last 5	08:30:25	2700.05	23.79	6.33	10599.22	1.90	12.25	0.13	-146.16
Variance 0			0.06	0.01	15.30			-0.00	-6.14
Variance 1			0.08	0.01	-1.84			-0.00	-4.76
Variance 2			0.05	0.00	4.45			-0.00	-3.68

Notes

Sample time @ 0835. Rainy 67.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 16:08:30

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 31.6 ft

Well Information:

Well ID APMW-5
Well diameter 2 in
Well Total Depth 36.6 ft
Screen Length 10 ft
Depth to Water 7.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:40:56	2703.05	22.34	6.36	22093.34	2.90	7.58	0.18	-97.04
Last 5	15:45:56	3003.05	22.35	6.35	22085.68	2.46	7.58	0.17	-96.14
Last 5	15:50:56	3303.05	22.32	6.35	22075.42	2.05	7.58	0.17	-95.65
Last 5	15:55:56	3603.05	22.27	6.35	22091.49	1.72	7.58	0.17	-94.54
Last 5	16:00:56	3903.05	22.35	6.35	22112.74	1.60	7.58	0.17	-93.79
Variance 0			-0.03	-0.00	-10.26			-0.00	0.49
Variance 1			-0.05	-0.00	16.06			-0.00	1.11
Variance 2			0.08	-0.00	21.25			-0.00	0.75

Notes

Sample time @ 1610. Rainy 58.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 14:13:18

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-7
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 12.10 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.28 in
Total Volume Pumped 26 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:50:09	2700.05	23.64	6.40	11281.96	3.30	12.38	0.11	-252.98
Last 5	13:55:09	3000.05	23.72	6.37	11273.35	2.56	12.38	0.11	-257.81
Last 5	14:00:09	3300.05	23.81	6.35	11291.15	2.34	12.38	0.10	-261.98
Last 5	14:05:09	3600.05	23.79	6.34	11294.90	1.95	12.38	0.10	-263.94
Last 5	14:10:09	3900.05	23.75	6.33	11294.95	1.90	12.38	0.10	-267.09
Variance 0			0.09	-0.02	17.80			-0.00	-4.16
Variance 1			-0.02	-0.02	3.75			-0.00	-1.97
Variance 2			-0.04	-0.01	0.05			-0.00	-3.14

Notes

Sample time @ 1415. Rainy 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 12:17:46

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 37.8 ft

Well Information:

Well ID APMW-8
Well diameter 2 in
Well Total Depth 42.8 ft
Screen Length 10 ft
Depth to Water 20.22 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7031711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.28 in
Total Volume Pumped 30 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:54:20	3301.04	23.87	6.72	10134.50	2.50	20.50	0.15	-107.88
Last 5	11:59:20	3601.05	23.97	6.72	10128.72	2.10	20.50	0.14	-110.91
Last 5	12:04:21	3902.05	23.97	6.72	10132.09	1.92	20.50	0.14	-113.16
Last 5	12:09:21	4202.05	23.88	6.72	10129.15	1.75	20.50	0.14	-115.54
Last 5	12:14:21	4502.05	23.93	6.72	10138.26	1.72	20.50	0.14	-117.73
Variance 0			-0.00	-0.00	3.37			-0.00	-2.25
Variance 1			-0.08	0.00	-2.94			-0.00	-2.38
Variance 2			0.04	-0.00	9.10			0.00	-2.19

Notes

Sample time@ 1220. Rainy 60. Dup-02 @ 1120.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 10:36:40

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 37.5 ft

Well Information:

Well ID APMW-9
Well diameter 2 in
Well Total Depth 42.5 ft
Screen Length 10 ft
Depth to Water 22.20 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.680854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.7 in
Total Volume Pumped 50 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:13:47	6305.04	24.47	6.17	8337.43	3.85	22.90	0.11	-26.12
Last 5	10:18:47	6605.04	24.25	6.17	8348.46	3.02	22.90	0.11	-26.18
Last 5	10:23:47	6905.04	23.97	6.17	8362.35	2.20	22.90	0.11	-25.76
Last 5	10:28:47	7205.05	24.00	6.17	8334.39	1.80	22.90	0.11	-25.82
Last 5	10:33:48	7506.04	24.14	6.17	8307.91	1.86	22.90	0.11	-25.81
Variance 0			-0.28	0.00	13.89			-0.00	0.42
Variance 1			0.03	0.00	-27.96			0.00	-0.06
Variance 2			0.15	0.00	-26.48			-0.00	0.01

Notes

Sample time @ 1035. Rainy 60.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-04 08:09:24

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 27.9 ft

Well Information:

Well ID APMW-10
Well diameter 2 in
Well Total Depth 32.9 ft
Screen Length 10 ft
Depth to Water 20.65 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.25 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	07:46:38	300.06	24.84	6.53	3922.83	2.30	20.90	0.20	-65.94
Last 5	07:51:38	600.04	25.06	6.61	3985.14	2.21	20.90	0.14	-76.04
Last 5	07:56:38	900.04	25.11	6.67	4011.94	1.33	20.90	0.13	-82.13
Last 5	08:01:38	1200.04	25.05	6.71	4034.62	1.25	20.90	0.12	-86.10
Last 5	08:06:38	1500.04	25.19	6.74	4030.63	1.17	20.90	0.11	-89.12
Variance 0			0.05	0.05	26.80			-0.02	-6.08
Variance 1			-0.06	0.04	22.68			-0.01	-3.97
Variance 2			0.14	0.03	-3.99			-0.01	-3.02

Notes

Sample time @ 0810. Cloudy 65.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-16 11:53:34

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 41 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 5 ft
Depth to Water 25.70 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2730314 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:29:53	901.01	21.89	6.75	5940.09	2.85	25.47	0.08	-184.56
Last 5	11:34:53	1201.00	21.94	6.73	5988.41	2.14	25.48	0.08	-183.63
Last 5	11:39:53	1501.00	21.90	6.71	6039.88	1.44	25.48	0.08	-173.30
Last 5	11:44:53	1801.00	21.89	6.69	6016.43	1.24	25.48	0.07	-171.44
Last 5	11:49:57	2104.99	21.95	6.67	6071.78	0.65	25.49	0.07	-175.82
Variance 0			-0.04	-0.02	51.47			0.00	10.32
Variance 1			-0.00	-0.02	-23.45			-0.01	1.86
Variance 2			0.06	-0.02	55.35			-0.00	-4.38

Notes

Sample time 1155. Cloudy 52.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-16 13:10:43

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 51 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 17.89 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3176656 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:47:58	900.01	21.46	6.92	225.10	2.15	18.00	0.25	-184.40
Last 5	12:52:58	1200.00	21.58	6.92	219.03	1.99	18.00	0.15	-186.30
Last 5	12:57:59	1501.00	21.62	6.95	214.33	1.90	18.00	0.15	-186.92
Last 5	13:02:59	1800.99	21.71	6.96	205.24	2.05	18.01	0.15	-187.24
Last 5	13:07:59	2100.99	21.67	6.97	204.65	1.73	18.01	0.10	-187.26
Variance 0			0.04	0.03	-4.70			-0.00	-0.62
Variance 1			0.09	0.01	-9.10			-0.00	-0.32
Variance 2			-0.04	0.01	-0.58			-0.05	-0.02

Notes

Sample time 1315. Cloudy 52.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-16 15:59:44

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 56 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 15.56 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3399517 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:36:50	4224.97	21.48	6.46	217.26	5.32	15.73	0.09	-107.90
Last 5	15:41:50	4524.97	21.55	6.45	212.70	6.00	15.73	0.08	-105.50
Last 5	15:46:50	4824.97	21.54	6.44	212.10	4.65	15.73	0.09	-105.04
Last 5	15:51:50	5124.96	21.55	6.44	210.85	5.12	15.73	0.08	-104.21
Last 5	15:56:50	5424.96	21.62	6.44	210.36	4.31	15.73	0.08	-104.06
Variance 0			-0.01	-0.00	-0.59			0.01	0.46
Variance 1			0.01	-0.00	-1.25			-0.01	0.83
Variance 2			0.07	-0.00	-0.50			0.00	0.15

Notes

Sample time 1605. Cloudy 52. EB-01 fake time 1505. FB-01 fake sample time 1505

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 09:01:21

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR catch up BG-2
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 5 ft
Depth to Water 25.87 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.33 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:37:34	1800.03	25.04	6.60	5518.82	3.30	26.20	1.46	-131.76
Last 5	08:42:34	2100.03	24.79	6.60	5584.92	2.10	26.20	1.57	-131.92
Last 5	08:47:34	2400.03	24.96	6.59	5597.90	1.90	26.20	1.36	-131.12
Last 5	08:52:34	2700.03	25.11	6.59	5635.86	1.82	26.20	1.18	-130.80
Last 5	08:57:34	3000.03	25.11	6.59	5660.19	1.85	26.20	1.37	-130.59
Variance 0			0.17	-0.01	12.98			-0.21	0.80
Variance 1			0.15	-0.00	37.96			-0.18	0.32
Variance 2			-0.00	-0.00	24.33			0.19	0.21

Notes

Sample time @ 0902. Sunny 55. Dup-01 @ 0802.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 11:39:33

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR catch up BG-2
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 16.20 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:17:09	2100.04	24.90	6.40	199.25	1.52	16.26	2.07	-92.26
Last 5	11:22:09	2400.04	24.92	6.40	199.38	1.51	16.26	2.64	-93.91
Last 5	11:27:09	2700.04	24.89	6.40	196.67	1.47	16.26	1.69	-94.08
Last 5	11:32:09	3000.04	24.87	6.40	199.47	1.45	16.26	1.69	-95.72
Last 5	11:37:09	3300.04	25.01	6.38	198.81	1.49	16.26	1.71	-94.43
Variance 0			-0.02	-0.00	-2.71			-0.95	-0.18
Variance 1			-0.02	0.00	2.80			-0.01	-1.64
Variance 2			0.14	-0.02	-0.66			0.02	1.29

Notes

Sample time @ 1140. Sunny 65. EB-01 @ 1030.

Grab Samples

Product Name: Low-Flow System

Date: 2019-03-27 13:02:27

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR catch up BG-2
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 52 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.52 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.322098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:39:54	1500.04	25.37	6.67	167.80	1.67	18.57	1.09	-167.54
Last 5	12:44:54	1800.04	25.40	6.68	168.97	1.51	18.57	1.03	-169.90
Last 5	12:49:54	2100.04	25.43	6.69	167.31	1.24	18.57	1.25	-170.32
Last 5	12:54:54	2400.04	25.43	6.69	166.65	1.18	18.57	1.36	-170.41
Last 5	12:59:54	2700.04	25.51	6.70	164.62	1.14	18.57	1.41	-169.13
Variance 0			0.03	0.01	-1.67			0.22	-0.42
Variance 1			-0.00	0.01	-0.65			0.11	-0.09
Variance 2			0.08	0.01	-2.03			0.05	1.28

Notes

Sample time @ 1305. Sunny 65.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 12:39:50

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.62 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:16:42	900.04	25.24	6.25	168.16	3.04	18.70	0.15	-107.23
Last 5	12:21:42	1200.05	24.87	6.30	168.19	1.71	18.70	0.15	-113.85
Last 5	12:26:42	1500.05	25.35	6.37	166.28	1.80	18.70	0.13	-114.53
Last 5	12:31:42	1800.04	25.54	6.40	165.11	1.28	18.70	0.14	-115.68
Last 5	12:36:42	2100.05	25.51	6.45	165.85	1.20	18.70	0.13	-123.68
Variance 0			0.48	0.06	-1.91			-0.01	-0.68
Variance 1			0.19	0.03	-1.17			0.00	-1.15
Variance 2			-0.02	0.05	0.75			-0.00	-8.00

Notes

Sample time @1240. Sunny 72. Dup-01 @ 1140.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 13:46:36

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 16.23 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.16 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:26:52	300.04	25.53	6.21	202.79	1.96	16.38	0.26	-66.12
Last 5	13:31:52	600.04	25.35	6.21	200.42	1.82	16.38	0.19	-74.67
Last 5	13:36:52	900.04	25.39	6.19	197.96	2.82	16.38	0.17	-75.68
Last 5	13:41:54	1202.04	25.41	6.19	196.37	1.70	16.38	0.19	-75.79
Last 5									
Variance 0			-0.18	0.01	-2.37			-0.06	-8.55
Variance 1			0.04	-0.02	-2.46			-0.02	-1.01
Variance 2			0.02	-0.00	-1.59			0.01	-0.12

Notes

Sample time @ 1350. Sunny 74.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-03 14:55:26

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 5 ft
Depth to Water 24.38 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.52 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:33:29	900.04	25.64	6.56	5708.33	5.51	24.90	0.26	-133.42
Last 5	14:38:29	1200.09	25.58	6.58	5779.79	4.82	24.90	0.29	-134.35
Last 5	14:43:29	1500.07	25.87	6.57	5786.62	1.78	24.90	0.27	-134.52
Last 5	14:48:29	1800.04	25.87	6.56	5808.99	1.75	24.90	0.28	-133.65
Last 5	14:53:29	2100.04	25.75	6.56	5870.47	1.69	24.90	0.30	-134.36
Variance 0			0.29	-0.00	6.83			-0.02	-0.17
Variance 1			-0.00	-0.01	22.37			0.01	0.87
Variance 2			-0.12	-0.00	61.49			0.02	-0.71

Notes

Sample time @ 1500. Sunny 75.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-05 12:43:24

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.37 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 26.04 in
Total Volume Pumped 46 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:03:21	5114.06	25.32	6.16	10786.20	1.83	8.54	0.06	-71.23
Last 5	12:08:21	5414.06	25.02	6.15	11126.46	1.80	8.54	0.05	-71.91
Last 5	12:23:21	6314.06	24.69	6.14	11269.09	1.68	8.54	0.04	-71.70
Last 5	12:28:21	6614.06	24.65	6.13	11285.06	1.74	8.54	0.04	-70.75
Last 5	12:33:21	6914.06	24.78	6.12	11337.32	1.77	8.54	0.04	-70.27
Variance 0			-0.33	-0.01	142.63			-0.01	0.20
Variance 1			-0.04	-0.01	15.96			-0.00	0.96
Variance 2			0.13	-0.01	52.26			0.00	0.48

Notes

Sample time @ 1235. PC 68. FB-02@ 1238.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-15 11:30:43

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 48.03 in
Total Volume Pumped 16 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:06:00	1200.07	24.06	6.19	9796.74	1.22	10.27	0.05	-86.79
Last 5	11:11:00	1500.06	24.21	6.17	9774.81	1.26	10.33	0.05	-81.45
Last 5	11:16:00	1800.12	24.31	6.16	9774.43	1.10	10.36	0.05	-78.51
Last 5	11:21:00	2100.07	24.46	6.15	9749.88	1.15	10.40	0.05	-75.99
Last 5	11:26:00	2400.05	24.51	6.14	9759.40	1.13	10.45	0.04	-73.79
Variance 0			0.10	-0.01	-0.38			-0.00	2.94
Variance 1			0.15	-0.01	-24.55			-0.00	2.53
Variance 2			0.05	-0.01	9.52			-0.00	2.20

Notes

Sample @ 1130. Sunny 70. DUP-01 @ 1030.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-15 13:43:56

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 10 ft
Depth to Water 24.42 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.48 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:20:58	300.08	25.65	6.66	4649.49	3.91	24.90	0.16	-121.60
Last 5	13:25:58	600.06	25.65	6.68	4675.95	1.80	24.90	0.14	-125.61
Last 5	13:30:58	900.07	25.87	6.68	4691.83	1.49	24.90	0.13	-128.40
Last 5	13:35:58	1200.07	25.78	6.68	4732.40	1.12	24.90	0.12	-130.28
Last 5	13:40:58	1500.06	25.78	6.68	4742.09	1.05	24.90	0.12	-131.56
Variance 0			0.22	0.00	15.88			-0.01	-2.79
Variance 1			-0.09	-0.00	40.57			-0.01	-1.88
Variance 2			-0.00	-0.00	9.69			-0.00	-1.28

Notes

Sample time @ 1345. Sunny 72. EB-01 @ 1310.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-16 08:01:09

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 52 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.00 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.322098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.1 in
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	07:38:14	900.01	24.65	6.38	132.38	1.84	18.10	1.72	-117.26
Last 5	07:43:14	1200.01	24.68	6.43	134.07	1.80	18.10	1.53	-122.02
Last 5	07:48:14	1500.01	24.77	6.47	130.23	1.66	18.10	1.79	-120.98
Last 5	07:53:14	1800.01	24.69	6.50	131.07	1.52	18.10	1.91	-119.70
Last 5	07:58:14	2100.01	24.65	6.52	131.59	1.48	18.10	1.72	-118.90
Variance 0			0.09	0.03	-3.84			0.26	1.04
Variance 1			-0.08	0.03	0.83			0.12	1.28
Variance 2			-0.04	0.02	0.52			-0.19	0.81

Notes

Sample time @ 0805. Sunny 65. DUP-02 @ 0705.

Grab Samples

Product Name: Low-Flow System

Date: 2019-04-16 09:00:17

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 15.70 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:38:19	300.02	24.25	6.34	164.13	1.16	15.75	0.58	-56.67
Last 5	08:43:19	600.02	24.35	6.34	163.25	1.22	15.75	0.70	-65.46
Last 5	08:48:19	900.02	24.42	6.33	162.99	1.30	15.75	0.69	-75.47
Last 5	08:53:19	1200.02	24.49	6.31	160.09	1.46	15.75	0.56	-77.89
Last 5	08:58:19	1500.02	24.55	6.30	159.76	1.44	15.75	0.59	-79.43
Variance 0			0.07	-0.01	-0.25			-0.00	-10.02
Variance 1			0.07	-0.02	-2.90			-0.13	-2.42
Variance 2			0.06	-0.01	-0.33			0.03	-1.53

Notes

Sample time @ 0905. Sunny 68.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-02 10:35:41

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32.4 ft

Well Information:

Well ID APMW-1
Well diameter 2 in
Well Total Depth 37.4 ft
Screen Length 10 ft
Depth to Water 24.13 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6585369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.3 in
Total Volume Pumped 46 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:12:02	5700.03	23.42	6.05	7448.53	5.34	24.24	0.02	-512.06
Last 5	10:17:02	6000.02	23.42	6.05	7573.85	5.63	24.24	0.02	-519.46
Last 5	10:22:02	6300.03	23.43	6.06	7701.54	5.71	24.24	0.02	-525.13
Last 5	10:27:02	6600.02	23.47	6.06	7843.23	5.63	24.24	0.02	-528.66
Last 5	10:32:02	6900.02	23.51	6.04	7999.77	5.78	24.24	0.02	-530.96
Variance 0			0.00	0.00	127.69			0.00	-5.67
Variance 1			0.05	0.00	141.69			0.00	-3.53
Variance 2			0.04	-0.01	156.54			-0.00	-2.31

Notes

Sample@1035, Sunny 75

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-02 14:42:26

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 46.5 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.57 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.33 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:20:36	1500.03	25.59	6.22	13405.17	1.42	6.90	5.10	-62.26
Last 5	14:25:36	1800.02	25.73	6.14	14161.36	1.53	6.90	5.08	-53.08
Last 5	14:30:36	2100.03	25.69	6.16	14220.54	1.73	6.90	5.11	-55.69
Last 5	14:35:36	2400.02	25.54	6.19	14927.96	1.84	6.90	5.04	-60.69
Last 5	14:40:36	2700.02	25.69	6.19	14638.14	1.66	6.90	5.06	-59.85
Variance 0			-0.04	0.01	59.18			0.02	-2.61
Variance 1			-0.14	0.03	707.41			-0.06	-5.00
Variance 2			0.15	-0.00	-289.82			0.02	0.83

Notes

Sample@1442, Sunny 85

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-03 07:27:24

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 57 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.15 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3444151 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.05 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	07:15:29	300.07	22.14	6.29	192.71	2.92	18.20	1.36	-101.34
Last 5	07:20:29	600.02	22.26	6.34	190.41	3.00	18.20	1.18	-107.42
Last 5	07:25:29	900.02	22.28	6.37	189.17	3.11	18.20	1.18	-106.18
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.13	0.05	-2.30			-0.17	-6.08
Variance 2			0.02	0.03	-1.24			-0.01	1.24

Notes

Sample@0726, DUP-02 @0626, Sunny 70

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-03 08:34:44

Project Information:

Operator Name Brett Surles
Company Name RDH
Project Name Watson CCR
Site Name Plant Watson CCR
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597516
Turbidity Make/Model HACH

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 58 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 15.82 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.7388785 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.03 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:16:38	300.03	22.38	6.25	235.71	1.90	15.85	0.33	-72.02
Last 5	08:23:14	300.03	22.38	6.30	236.51	1.90	15.85	0.32	-81.76
Last 5	08:28:14	600.02	22.48	6.32	238.92	1.74	15.85	0.33	-83.78
Last 5	08:33:14	900.02	22.52	6.33	239.00	1.61	15.85	0.40	-81.96
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.10	0.03	2.42			0.01	-2.02
Variance 2			0.04	0.01	0.08			0.08	1.82

Notes

Sample@0833, EB-1@0850, Sunny 71

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-14 11:13:30

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.35 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 41.64 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:50:34	600.02	24.42	5.90	9758.84	1.20	9.82	0.08	-40.10
Last 5	10:55:34	900.02	24.47	5.95	10396.13	1.03	9.82	0.07	-53.38
Last 5	11:00:35	1201.06	24.60	6.04	10711.04	1.10	9.82	0.06	-63.92
Last 5	11:05:35	1501.02	24.74	6.09	10676.10	1.08	9.82	0.06	-69.32
Last 5	11:10:35	1801.02	24.62	6.12	10643.34	1.15	9.82	0.06	-70.04
Variance 0			0.13	0.09	314.91			-0.01	-10.53
Variance 1			0.14	0.05	-34.94			-0.00	-5.41
Variance 2			-0.11	0.02	-32.77			-0.00	-0.71

Notes

Sample time @ 1115. Sunny 80. EB-01 @ 1120.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-14 12:54:19

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 41 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 10 ft
Depth to Water 23.95 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2730004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.2 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:35:08	300.02	26.47	6.66	5196.23	2.02	24.30	0.13	-105.28
Last 5	12:40:08	600.02	26.33	6.69	5228.41	1.78	24.30	0.12	-112.64
Last 5	12:45:08	900.02	26.39	6.70	5244.69	1.62	24.30	0.11	-117.76
Last 5	12:50:08	1200.02	26.35	6.70	5272.36	1.55	24.30	0.10	-121.09
Last 5									
Variance 0			-0.14	0.03	32.18			-0.01	-7.36
Variance 1			0.06	0.01	16.28			-0.01	-5.13
Variance 2			-0.04	0.01	27.67			-0.01	-3.32

Notes

Sample time @ 1300. Sunny 80. DUP-01 @ 1200.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-14 16:08:11

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 56 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 15.28 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3399517 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.68 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:45:14	300.02	26.03	7.02	159.60	1.94	15.42	0.09	-196.92
Last 5	15:50:14	600.02	25.92	6.95	156.96	1.68	15.42	0.07	-196.18
Last 5	15:55:14	900.02	26.28	6.81	160.04	1.72	15.42	0.06	-195.46
Last 5	16:00:14	1200.02	26.33	6.71	160.68	1.65	15.42	0.10	-195.74
Last 5	16:05:14	1500.02	26.24	6.64	162.77	1.60	15.42	0.09	-194.13
Variance 0			0.37	-0.13	3.07			-0.01	0.72
Variance 1			0.05	-0.11	0.64			0.04	-0.28
Variance 2			-0.09	-0.07	2.10			-0.01	1.62

Notes

Sample time @ 1610. Sunny 80.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-14 17:27:06

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 51 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 17.56 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3176346 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.08 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	17:05:14	1500.02	26.00	6.56	132.71	1.85	17.65	0.78	-163.35
Last 5	17:10:14	1800.03	26.05	6.59	135.25	1.83	17.65	0.99	-171.07
Last 5	17:15:14	2100.02	26.01	6.56	134.16	1.70	17.65	0.79	-163.29
Last 5	17:20:14	2400.02	25.95	6.58	131.93	1.72	17.65	0.67	-162.16
Last 5	17:25:14	2700.02	25.94	6.57	131.83	1.68	17.65	0.85	-154.93
Variance 0			-0.05	-0.03	-1.09			-0.19	7.78
Variance 1			-0.06	0.01	-2.24			-0.12	1.13
Variance 2			-0.01	-0.00	-0.10			0.18	7.23

Notes

Sample time @ 1730. Sunny 80.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-28 14:19:00

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 10 ft
Depth to Water 23.95 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.2 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:55:57	600.03	26.15	6.41	5393.22	2.10	24.30	0.19	-78.28
Last 5	14:00:57	900.02	26.05	6.51	5428.16	2.02	24.30	0.17	-89.11
Last 5	14:05:57	1200.02	26.14	6.54	5431.93	1.99	24.30	0.15	-95.45
Last 5	14:10:57	1500.02	26.21	6.55	5448.90	1.79	24.30	0.13	-100.10
Last 5	14:15:57	1800.03	26.23	6.56	5484.16	1.65	24.30	0.13	-103.84
Variance 0			0.09	0.03	3.76			-0.02	-6.33
Variance 1			0.07	0.02	16.97			-0.01	-4.66
Variance 2			0.02	0.01	35.26			-0.01	-3.74

Notes

Sample time @ 1420. Sunny 87. DUP-01 @ 1320.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-29 09:08:55

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.43 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.44 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:45:27	300.03	24.86	6.02	9814.77	2.89	6.80	0.08	-24.57
Last 5	08:50:27	600.03	24.83	6.08	10058.13	2.66	6.80	0.06	-44.87
Last 5	08:55:27	900.03	24.87	6.07	10873.00	2.20	6.80	0.05	-51.93
Last 5	09:00:27	1200.03	24.87	6.10	11313.62	1.94	6.80	0.04	-58.91
Last 5	09:05:27	1500.03	24.87	6.11	11307.84	1.89	6.80	0.04	-61.30
Variance 0			0.05	-0.01	814.86			-0.01	-7.06
Variance 1			0.00	0.03	440.63			-0.01	-6.98
Variance 2			-0.00	0.02	-5.79			-0.00	-2.39

Notes

Sample time @ 0910. Sunny 85. EB-01@ 0815.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-29 10:04:13

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 51 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.23 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3176346 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:51:47	300.03	26.38	6.68	141.53	1.68	18.35	0.22	-71.11
Last 5	09:56:47	600.03	26.35	6.63	136.13	1.40	18.35	0.18	-74.84
Last 5	10:01:47	900.03	26.47	6.60	136.60	1.33	18.35	0.16	-77.14
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.03	-0.05	-5.40			-0.04	-3.73
Variance 2			0.11	-0.02	0.47			-0.01	-2.30

Notes

Sample time @ 1005. Sunny 87. DUP-02 @ 0905.

Grab Samples

Product Name: Low-Flow System

Date: 2019-05-29 10:59:57

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 56 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 15.92 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3399517 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.16 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	10:38:44	300.03	26.10	6.26	177.11	1.20	16.10	0.08	-15.74
Last 5	10:43:44	600.03	25.98	6.25	175.27	1.05	16.10	0.06	-20.88
Last 5	10:48:44	900.03	25.98	6.27	178.40	0.96	16.10	0.05	-27.10
Last 5	10:53:44	1200.03	26.02	6.30	180.92	0.88	16.10	0.05	-32.50
Last 5	10:58:44	1500.03	26.10	6.31	180.88	0.85	16.10	0.04	-36.26
Variance 0			-0.01	0.02	3.13			-0.01	-6.22
Variance 1			0.04	0.02	2.53			-0.00	-5.40
Variance 2			0.08	0.02	-0.05			-0.00	-3.76

Notes

Sample time @ 1100. Sunny 87.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-12 14:23:34

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 632615
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 46 ft

Pump placement from TOC 36.1 ft

Well Information:

Well ID APMW-1R
Well diameter 2 in
Well Total Depth 38.6 ft
Screen Length 5 ft
Depth to Water 24.06 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6853175 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:05:39	300.03	23.48	6.67	6489.92	3.97	24.61	0.13	-100.77
Last 5	14:10:39	600.02	23.27	6.70	6528.02	2.15	24.62	0.10	-111.99
Last 5	14:15:39	900.02	23.22	6.70	6574.17	2.21	24.64	0.08	-117.17
Last 5	14:20:39	1200.02	23.16	6.69	6614.23	0.99	24.66	0.08	-120.01
Last 5									
Variance 0			-0.21	0.03	38.10			-0.03	-11.23
Variance 1			-0.05	0.00	46.15			-0.02	-5.17
Variance 2			-0.06	-0.01	40.06			-0.00	-2.84

Notes

Sample time 1424. Cloudy 84.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-12 14:40:49

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 51 ft

Pump placement from TOC 46.6 ft

Well Information:

Well ID PZ-1 APMW-11
Well diameter 2 in
Well Total Depth 51.6 ft
Screen Length 10 ft
Depth to Water 18.41 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3176346 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.08 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	14:17:04	300.02	23.50	6.31	144.16	1.67	18.49	0.57	-107.85
Last 5	14:24:32	748.02	23.24	6.38	144.66	1.93	18.49	0.34	-127.15
Last 5	14:29:32	1048.01	23.24	6.40	144.90	1.27	18.49	0.28	-132.58
Last 5	14:34:33	1349.01	23.23	6.41	144.84	1.69	18.49	0.32	-134.99
Last 5									
Variance 0			-0.26	0.07	0.49			-0.23	-19.30
Variance 1			-0.00	0.02	0.24			-0.06	-5.43
Variance 2			-0.00	0.01	-0.05			0.04	-2.41

Notes

Sample time at 1440 cloudy 78.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-12 15:22:59

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 56 ft

Pump placement from TOC 49.1 ft

Well Information:

Well ID PZ-2 APMW-12
Well diameter 2 in
Well Total Depth 54.1 ft
Screen Length 10 ft
Depth to Water 16.09 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3399517 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.06 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	15:03:13	300.04	23.55	6.25	195.15	3.01	16.14	0.48	-99.85
Last 5	15:08:13	600.02	23.46	6.26	194.47	1.64	16.15	0.48	-110.49
Last 5	15:13:13	900.02	23.63	6.28	195.33	2.11	16.15	0.29	-111.66
Last 5	15:18:15	1202.02	23.64	6.31	197.30	1.68	16.15	0.41	-109.92
Last 5									
Variance 0			-0.09	0.01	-0.67			-0.01	-10.64
Variance 1			0.17	0.02	0.85			-0.19	-1.17
Variance 2			0.01	0.03	1.97			0.12	1.74

Notes

Cloudy 78 sample time at 1525.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-12 16:47:51

Project Information:

Operator Name Trevor Braddock
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 625126
Turbidity Make/Model 2100q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 52 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.38 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.322098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 22 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	16:22:26	300.01	23.38	5.93	12330.54	3.43	8.49	0.22	-31.33
Last 5	16:27:26	600.01	23.07	5.98	12698.25	3.31	8.72	0.18	-44.17
Last 5	16:32:26	900.01	22.90	6.04	12916.76	2.59	8.80	0.16	-51.62
Last 5	16:37:26	1200.00	22.86	6.07	12956.09	3.65	8.81	0.14	-55.46
Last 5	16:42:26	1500.00	22.88	6.09	12852.92	2.68	8.86	0.12	-57.91
Variance 0			-0.17	0.05	218.51			-0.02	-7.45
Variance 1			-0.05	0.03	39.33			-0.02	-3.83
Variance 2			0.02	0.02	-103.16			-0.03	-2.45

Notes

Eb-01 sample time 1621. Fb-01 sample time 1611. Pz-3 sample time 1645 78 cloudy.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-19 14:01:06

Project Information:

Operator Name Rick Hagendorfer
Company Name RDH Environmental
Project Name Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 632615
Turbidity Make/Model Hach 2100Q

Pump Information:

Pump Model/Type QED
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 66 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.38 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.774586 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 36 in
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	13:36:30	1500.02	24.01	6.09	13017.89	0.83	9.38	0.07	-52.73
Last 5	13:41:30	1800.02	23.88	6.10	12984.32	0.76	9.39	0.07	-56.10
Last 5	13:46:30	2100.02	23.52	6.10	12970.99	1.02	9.38	0.07	-57.27
Last 5	13:51:31	2401.02	23.47	6.10	12939.37	1.24	9.37	0.06	-58.03
Last 5	13:56:31	2701.02	23.43	6.10	12902.81	0.97	9.36	0.06	-58.07
Variance 0			-0.36	0.00	-13.32			-0.00	-1.17
Variance 1			-0.06	0.00	-31.62			-0.00	-0.76
Variance 2			-0.03	0.00	-36.56			-0.00	-0.04

Notes

Sample time 1400. FB-01 sample time 1215. EB-01 sample time 1225. P/C 90.

Grab Samples

Product Name: Low-Flow System

Date: 2019-06-25 09:21:38

Project Information:

Operator Name Philip Evans
Company Name RDH Environmental
Project Name Plant Watson CCR
Site Name Plant Watson
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 417744
Turbidity Make/Model HACH 2100Q

Pump Information:

Pump Model/Type PP
Tubing Type PE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 46.85 ft

Well Information:

Well ID PZ-3 APMW-6R
Well diameter 2 in
Well Total Depth 51.85 ft
Screen Length 10 ft
Depth to Water 6.63 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 29.04 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.2	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	08:58:40	300.08	26.19	5.78	9693.93	2.34	9.05	0.20	-41.41
Last 5	09:03:40	600.02	26.14	5.95	9843.82	1.85	9.05	0.15	-63.36
Last 5	09:08:40	900.02	26.08	6.07	9876.64	1.80	9.05	0.13	-73.07
Last 5	09:13:40	1200.02	25.98	6.16	9869.99	1.64	9.05	0.12	-78.11
Last 5	09:18:40	1500.02	25.93	6.18	10228.36	1.55	9.05	0.11	-81.46
Variance 0			-0.07	0.13	32.82			-0.02	-9.72
Variance 1			-0.10	0.08	-6.65			-0.01	-5.04
Variance 2			-0.05	0.03	358.37			-0.01	-3.35

Notes

Sample time @ 0925. Sunny 90. DUP-01@ 0825.

Grab Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-152827-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

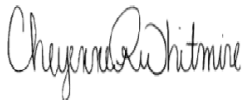
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

5/22/2018 12:55:30 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Job ID: 400-152827-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-152827-1

Metals

Method(s) 6020: The serial dilution performed for the following sample associated with batch 396639 was outside control limits: (400-152827-B-2-B SD)

Method(s) 6020: The post digestion spike % recovery for Boron associated with batch 396639 was outside of control limits.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 396415 and analytical batch 396639 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-152827-1), APMW-2 (400-152827-2), APMW-3 (400-152827-3), APMW-4 (400-152827-4), APMW-5 (400-152827-5), APMW-6 (400-152827-6), APMW-8 (400-152827-8), APMW-9 (400-152827-9), DUP-01 (400-152827-11) and DUP-02 (400-152827-12). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 396360 and analytical batch 396716 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 396183 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-152827-1), APMW-2 (400-152827-2), APMW-3 (400-152827-3), APMW-4 (400-152827-4), APMW-5 (400-152827-5), APMW-6 (400-152827-6), APMW-7 (400-152827-7), APMW-8 (400-152827-8), APMW-9 (400-152827-9), APMW-10 (400-152827-10), DUP-01 (400-152827-11) and DUP-02 (400-152827-12). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 396324 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 396324 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: APMW-4 (400-152827-4), APMW-9 (400-152827-9) and DUP-01 (400-152827-11) Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-5 (400-152827-5), APMW-6 (400-152827-6), APMW-7 (400-152827-7), APMW-8 (400-152827-8), APMW-9 (400-152827-9), APMW-10 (400-152827-10) and DUP-02 (400-152827-12). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-152827-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.64		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00035	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	3.5		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	210		1.3	0.63	mg/L	25		6020	Total Recoverable
Barium, Dissolved	0.63		0.0025	0.00049	mg/L	5		6020	Dissolved
Selenium, Dissolved	0.00033	J	0.0013	0.00024	mg/L	5		6020	Dissolved
Lithium, Dissolved	0.012		0.0050	0.0011	mg/L	5		6020	Dissolved
Boron, Dissolved - DL	3.6		0.25	0.11	mg/L	25		6020	Dissolved
Calcium, Dissolved - DL	220		1.3	0.63	mg/L	25		6020	Dissolved
Total Dissolved Solids	3100		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1600		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	4.0	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.91				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-152827-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00077	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	2.8		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.029	F1	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	4.1		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	310		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	4800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Field pH	5.89				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-152827-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.084		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.097		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.11		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.073		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0016		0.0013	0.00024	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-152827-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.00012	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	5.3		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	18000		250	170	mg/L	1		SM 2540C	Total/NA
Chloride	11000		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.33		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		250	70	mg/L	50		SM 4500 SO4 E	Total/NA
Field pH	6.46				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-152827-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.46		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0033		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.079		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00055	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	190		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4000		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.52		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	340		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.31				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-152827-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.24		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.093		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.069		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.056		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00071	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-5 (Continued)

Lab Sample ID: 400-152827-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	6.9		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	350		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	16000		250	170	mg/L	1		SM 2540C	Total/NA
Chloride	8500		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	920		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.04				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-152827-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.57		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00050	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00066	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lead	0.00035	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.036		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00054	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	15		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	200		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.3		0.30	0.017	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2200		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.85				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-152827-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.66		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.0		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	93		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-7 (Continued)

Lab Sample ID: 400-152827-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0040	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.00096	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00046	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7500		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3900		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	65		10	2.8	mg/L	2		SM 4500 SO4 E	Total/NA
Field pH	6.31				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-152827-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.097		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.20		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.13		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.18		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00042	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	23		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	560		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	6400		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3400		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	670		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-152827-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.42		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0039	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00081	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.8		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	5800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-9 (Continued)

Lab Sample ID: 400-152827-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.19				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-152827-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.13		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.26		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	68		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.021		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.11		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00061	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	2500		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1300		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.69		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	290		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.70				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-152827-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.020		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0033		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.085		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.010	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00064	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	2.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	200		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	6600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4000		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.53		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-152827-12

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
 SDG: Ash Pond

Client Sample ID: DUP-02 (Continued)

Lab Sample ID: 400-152827-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.10		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.21		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.13		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.19		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00077	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	22		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	550		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	7600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3500		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.98		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	680		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-152827-1	APMW-1	Water	04/24/18 12:10	04/26/18 08:45
400-152827-2	APMW-2	Water	04/24/18 14:26	04/26/18 08:45
400-152827-3	APMW-3	Water	04/24/18 15:44	04/26/18 08:45
400-152827-4	APMW-4	Water	04/24/18 17:41	04/26/18 08:45
400-152827-5	APMW-5	Water	04/25/18 08:08	04/26/18 08:45
400-152827-6	APMW-6	Water	04/25/18 10:42	04/26/18 08:45
400-152827-7	APMW-7	Water	04/25/18 12:52	04/26/18 08:45
400-152827-8	APMW-8	Water	04/25/18 14:21	04/26/18 08:45
400-152827-9	APMW-9	Water	04/25/18 16:40	04/26/18 08:45
400-152827-10	APMW-10	Water	04/25/18 17:37	04/26/18 08:45
400-152827-11	DUP-01	Water	04/24/18 16:41	04/26/18 08:45
400-152827-12	DUP-02	Water	04/25/18 13:21	04/26/18 08:45

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-1
Date Collected: 04/24/18 12:10
Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 16:03	5
Barium	0.64		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 16:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 16:03	5
Lithium	0.013		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 16:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 16:03	5
Selenium	0.00035 J		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 16:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 16:03	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.25	0.11	mg/L		05/04/18 08:42	05/07/18 14:00	25
Calcium	210		1.3	0.63	mg/L		05/04/18 08:42	05/07/18 14:00	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/18 08:42	05/07/18 13:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/07/18 13:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/07/18 13:56	5

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium, Dissolved	0.63		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 15:59	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 15:59	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 15:59	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 15:59	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 15:59	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 15:59	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 15:59	5
Selenium, Dissolved	0.00033 J		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 15:59	5
Lithium, Dissolved	0.012		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 15:59	5

Method: 6020 - Metals (ICP/MS) - Dissolved - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron, Dissolved	3.6		0.25	0.11	mg/L		05/04/18 08:42	05/07/18 13:51	25
Calcium, Dissolved	220		1.3	0.63	mg/L		05/04/18 08:42	05/07/18 13:51	25

Method: 6020 - Metals (ICP/MS) - Dissolved - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		05/04/18 08:42	05/07/18 13:47	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/07/18 13:47	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/07/18 13:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 10:51	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:36	1

TestAmerica Pensacola

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
 SDG: Ash Pond

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3100		25	17	mg/L			04/29/18 13:11	1
Chloride	1600		180	54	mg/L			05/02/18 10:36	90
Fluoride	0.090	J	0.10	0.032	mg/L			05/02/18 15:14	1
Sulfate	4.0	J	5.0	1.4	mg/L			05/03/18 10:49	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.91				SU			04/24/18 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-152827-2

Date Collected: 04/24/18 14:26

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 16:08	5
Arsenic	0.00077	J	0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 16:08	5
Barium	2.8		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 16:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 16:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 16:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 16:08	5
Lithium	0.029	F1	0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 16:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 16:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 16:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 16:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.1		0.25	0.11	mg/L		05/04/18 08:42	05/07/18 14:36	25
Calcium	310		1.3	0.63	mg/L		05/04/18 08:42	05/07/18 14:36	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4800		50	34	mg/L			04/29/18 13:11	1
Chloride	2800		180	54	mg/L			05/02/18 10:36	90
Fluoride	0.060	J	0.10	0.032	mg/L			05/02/18 15:16	1
Sulfate	<1.4		5.0	1.4	mg/L			05/03/18 10:49	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.89				SU			04/24/18 14:26	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-152827-3

Date Collected: 04/24/18 15:44

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 16:53	5
Arsenic	0.084		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 16:53	5
Barium	0.097		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 16:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 16:53	5
Cobalt	0.0026		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 16:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 16:53	5
Lithium	0.11		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 16:53	5
Molybdenum	0.073		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 16:53	5
Selenium	0.0016		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 16:53	5
Thallium	0.00012	J	0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 16:53	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.3		0.50	0.21	mg/L		05/04/18 08:42	05/07/18 14:47	50
Calcium	320		2.5	1.3	mg/L		05/04/18 08:42	05/07/18 14:47	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18000		250	170	mg/L			04/29/18 13:11	1
Chloride	11000		600	180	mg/L			05/02/18 11:45	300
Fluoride	0.33		0.10	0.032	mg/L			05/02/18 15:25	1
Sulfate	1200		250	70	mg/L			05/03/18 11:41	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.46				SU			04/24/18 15:44	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-152827-4

Date Collected: 04/24/18 17:41

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 16:57	5
Arsenic	0.019		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 16:57	5
Barium	0.46		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 16:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 16:57	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 16:57	5
Cobalt	0.0033		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 16:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 16:57	5
Lithium	0.079		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 16:57	5
Molybdenum	0.011	J	0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 16:57	5
Selenium	0.00055	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 16:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 16:57	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		05/04/18 08:42	05/07/18 14:51	25
Calcium	190		1.3	0.63	mg/L		05/04/18 08:42	05/07/18 14:51	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7700		50	34	mg/L			04/29/18 13:11	1
Chloride	4000		180	54	mg/L			05/02/18 10:39	90
Fluoride	0.52		0.10	0.032	mg/L			05/02/18 15:30	1
Sulfate	340		50	14	mg/L			05/03/18 10:58	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.31				SU			04/24/18 17:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-152827-5

Date Collected: 04/25/18 08:08

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:02	5
Arsenic	0.24		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:02	5
Barium	0.093		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:02	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:02	5
Lithium	0.069		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:02	5
Molybdenum	0.056		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 17:02	5
Selenium	0.00071	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:02	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.9		0.50	0.21	mg/L		05/04/18 08:42	05/07/18 14:56	50
Calcium	350		2.5	1.3	mg/L		05/04/18 08:42	05/07/18 14:56	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16000		250	170	mg/L			04/29/18 13:11	1
Chloride	8500		600	180	mg/L			05/02/18 11:45	300
Fluoride	0.090	J	0.10	0.032	mg/L			05/02/18 15:34	1
Sulfate	920		150	42	mg/L			05/06/18 12:43	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.04				SU			04/25/18 08:08	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-152827-6

Date Collected: 04/25/18 10:42

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:06	5
Arsenic	0.57		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:06	5
Barium	0.23		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:06	5
Cadmium	0.00050	J	0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:06	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:06	5
Cobalt	0.00066	J	0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:06	5
Lead	0.00035	J	0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:06	5
Lithium	0.036		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:06	5
Selenium	0.00054	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:06	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		1.0	0.42	mg/L		05/04/18 08:42	05/07/18 15:00	100
Calcium	200		5.0	2.5	mg/L		05/04/18 08:42	05/07/18 15:00	100
Molybdenum	1.3		0.30	0.017	mg/L		05/04/18 08:42	05/07/18 15:00	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4200		50	34	mg/L			04/29/18 13:11	1
Chloride	2200		180	54	mg/L			05/02/18 10:39	90
Fluoride	1.0		0.10	0.032	mg/L			05/02/18 15:36	1
Sulfate	330		50	14	mg/L			05/06/18 11:11	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.85				SU			04/25/18 10:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-7

Date Collected: 04/25/18 12:52

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-7

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:21	5
Arsenic	0.0021		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:21	5
Barium	0.66		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:21	5
Boron	1.0		0.050	0.021	mg/L		05/04/18 08:42	05/04/18 17:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:21	5
Calcium	93		0.25	0.13	mg/L		05/04/18 08:42	05/04/18 17:21	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:21	5
Lithium	0.0040	J	0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:21	5
Molybdenum	0.00096	J	0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 17:21	5
Selenium	0.00046	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:21	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7500		50	34	mg/L			04/29/18 13:11	1
Chloride	3900		180	54	mg/L			05/02/18 10:39	90
Fluoride	0.11		0.10	0.032	mg/L			05/02/18 15:39	1
Sulfate	65		10	2.8	mg/L			05/06/18 11:11	2

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.31				SU			04/25/18 12:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-152827-8

Date Collected: 04/25/18 14:21

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:26	5
Arsenic	0.097		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:26	5
Barium	0.20		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:26	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:26	5
Lithium	0.13		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:26	5
Molybdenum	0.18		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 17:26	5
Selenium	0.00042	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:26	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	23		2.0	0.84	mg/L		05/04/18 08:42	05/07/18 15:06	200
Calcium	560		10	5.0	mg/L		05/04/18 08:42	05/07/18 15:06	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6400		50	34	mg/L			04/29/18 13:11	1
Chloride	3400		180	54	mg/L			05/02/18 10:39	90
Fluoride	1.0		0.10	0.032	mg/L			05/02/18 15:41	1
Sulfate	670		150	42	mg/L			05/06/18 12:43	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.69				SU			04/25/18 14:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-152827-9

Date Collected: 04/25/18 16:40

Matrix: Water

Date Received: 04/26/18 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:53	5
Arsenic	0.0016		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:53	5
Barium	0.42		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:53	5
Lithium	0.0039	J	0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 17:53	5
Selenium	0.00081	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:53	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.8		0.50	0.21	mg/L		05/04/18 08:42	05/07/18 15:10	50
Calcium	320		2.5	1.3	mg/L		05/04/18 08:42	05/07/18 15:10	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5800		50	34	mg/L			04/29/18 13:11	1
Chloride	2800		180	54	mg/L			05/02/18 10:47	90
Fluoride	0.060	J	0.10	0.032	mg/L			05/02/18 15:43	1
Sulfate	270		50	14	mg/L			05/06/18 12:43	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.19				SU			04/25/18 16:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-10

Date Collected: 04/25/18 17:37

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-10

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 17:58	5
Arsenic	0.13		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 17:58	5
Barium	0.26		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 17:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:58	5
Boron	1.7		0.050	0.021	mg/L		05/04/18 08:42	05/04/18 17:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 17:58	5
Calcium	68		0.25	0.13	mg/L		05/04/18 08:42	05/04/18 17:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 17:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 17:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 17:58	5
Lithium	0.021		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 17:58	5
Molybdenum	0.11		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 17:58	5
Selenium	0.00061	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 17:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 17:58	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2500		25	17	mg/L			04/29/18 13:11	1
Chloride	1300		180	54	mg/L			05/02/18 10:47	90
Fluoride	0.69		0.10	0.032	mg/L			05/03/18 13:39	1
Sulfate	290		50	14	mg/L			05/06/18 12:43	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.70				SU			04/25/18 17:37	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 04/24/18 16:41
Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 18:02	5
Arsenic	0.020		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 18:02	5
Barium	0.50		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 18:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 18:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 18:02	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 18:02	5
Cobalt	0.0033		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 18:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 18:02	5
Lithium	0.085		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 18:02	5
Molybdenum	0.010	J	0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 18:02	5
Selenium	0.00064	J	0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 18:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 18:02	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.0		0.25	0.11	mg/L		05/04/18 08:42	05/07/18 15:15	25
Calcium	200		1.3	0.63	mg/L		05/04/18 08:42	05/07/18 15:15	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6600		50	34	mg/L			04/29/18 13:11	1
Chloride	4000		180	54	mg/L			05/02/18 10:47	90
Fluoride	0.53		0.10	0.032	mg/L			05/02/18 15:32	1
Sulfate	330		50	14	mg/L			05/03/18 11:02	10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 04/25/18 13:21
Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 18:07	5
Arsenic	0.10		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 18:07	5
Barium	0.21		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 18:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 18:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 18:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 18:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 18:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 18:07	5
Lithium	0.13		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 18:07	5
Molybdenum	0.19		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 18:07	5
Selenium	0.00077 J		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 18:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 18:07	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	22		2.0	0.84	mg/L		05/04/18 08:42	05/07/18 15:19	200
Calcium	550		10	5.0	mg/L		05/04/18 08:42	05/07/18 15:19	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 11:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7600		50	34	mg/L			04/29/18 13:11	1
Chloride	3500		180	54	mg/L			05/02/18 10:47	90
Fluoride	0.98		0.10	0.032	mg/L			05/03/18 13:41	1
Sulfate	680		150	42	mg/L			05/06/18 12:47	30

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 04/24/18 12:10

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Dissolved	Analysis	6020		5	396639	05/04/18 15:59	DRE	TAL PEN
Dissolved	Prep	3005A	RA		396415	05/04/18 08:42	DRE	TAL PEN
Dissolved	Analysis	6020	RA	5	396765	05/07/18 13:47	DRE	TAL PEN
Dissolved	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Dissolved	Analysis	6020	DL	25	396765	05/07/18 13:51	DRE	TAL PEN
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 16:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	396765	05/07/18 13:56	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	396765	05/07/18 14:00	DRE	TAL PEN
Dissolved	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Dissolved	Analysis	7470A		1	396716	05/07/18 11:36	JAP	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 10:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	396150	05/02/18 10:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:14	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	396324	05/03/18 10:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/24/18 12:10	AW	TAL PEN

Client Sample ID: APMW-2

Date Collected: 04/24/18 14:26

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 16:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	396765	05/07/18 14:36	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	396150	05/02/18 10:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	396324	05/03/18 10:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/24/18 14:26	AW	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-152827-3

Date Collected: 04/24/18 15:44

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 16:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	396765	05/07/18 14:47	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	396150	05/02/18 11:45	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:25	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	396324	05/03/18 11:41	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/24/18 15:44	AW	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-152827-4

Date Collected: 04/24/18 17:41

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 16:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	396765	05/07/18 14:51	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:39	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	396324	05/03/18 10:58	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/24/18 17:41	AW	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-152827-5

Date Collected: 04/25/18 08:08

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:02	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	396765	05/07/18 14:56	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	396150	05/02/18 11:45	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-152827-5

Date Collected: 04/25/18 08:08

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:34	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	396576	05/06/18 12:43	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 08:08	AW	TAL PEN

Client Sample ID: APMW-6

Lab Sample ID: 400-152827-6

Date Collected: 04/25/18 10:42

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:06	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	396765	05/07/18 15:00	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:39	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	396576	05/06/18 11:11	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 10:42	AW	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-152827-7

Date Collected: 04/25/18 12:52

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:21	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:39	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:39	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		2	396576	05/06/18 11:11	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 12:52	AW	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-152827-8

Date Collected: 04/25/18 14:21

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-152827-8

Date Collected: 04/25/18 14:21

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:26	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	396765	05/07/18 15:06	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:39	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	396576	05/06/18 12:43	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 14:21	AW	TAL PEN

Client Sample ID: APMW-9

Lab Sample ID: 400-152827-9

Date Collected: 04/25/18 16:40

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	396765	05/07/18 15:10	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	396576	05/06/18 12:43	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 16:40	AW	TAL PEN

Client Sample ID: APMW-10

Lab Sample ID: 400-152827-10

Date Collected: 04/25/18 17:37

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 17:58	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	396150	05/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396332	05/03/18 13:39	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	396576	05/06/18 12:43	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	398500	04/25/18 17:37	AW	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Client Sample ID: DUP-01

Date Collected: 04/24/18 16:41

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 18:02	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	396765	05/07/18 15:15	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	396150	05/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396183	05/02/18 15:32	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	396324	05/03/18 11:02	RRC	TAL PEN

Client Sample ID: DUP-02

Date Collected: 04/25/18 13:21

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	396639	05/04/18 18:07	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		396415	05/04/18 08:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	396765	05/07/18 15:19	DRE	TAL PEN
Total/NA	Prep	7470A			396360	05/06/18 13:22	DN1	TAL PEN
Total/NA	Analysis	7470A		1	396716	05/07/18 11:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	395731	04/29/18 13:11	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	396150	05/02/18 10:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	396332	05/03/18 13:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	396576	05/06/18 12:47	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Metals

Prep Batch: 396360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Dissolved	Water	7470A	
400-152827-1	APMW-1	Total/NA	Water	7470A	
400-152827-2	APMW-2	Total/NA	Water	7470A	
400-152827-3	APMW-3	Total/NA	Water	7470A	
400-152827-4	APMW-4	Total/NA	Water	7470A	
400-152827-5	APMW-5	Total/NA	Water	7470A	
400-152827-6	APMW-6	Total/NA	Water	7470A	
400-152827-7	APMW-7	Total/NA	Water	7470A	
400-152827-8	APMW-8	Total/NA	Water	7470A	
400-152827-9	APMW-9	Total/NA	Water	7470A	
400-152827-10	APMW-10	Total/NA	Water	7470A	
400-152827-11	DUP-01	Total/NA	Water	7470A	
400-152827-12	DUP-02	Total/NA	Water	7470A	
MB 400-396360/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-396360/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-152827-1 MS	APMW-1	Total/NA	Water	7470A	
400-152827-1 MSD	APMW-1	Total/NA	Water	7470A	

Prep Batch: 396415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1 - RA	APMW-1	Dissolved	Water	3005A	
400-152827-1 - DL	APMW-1	Dissolved	Water	3005A	
400-152827-1	APMW-1	Dissolved	Water	3005A	
400-152827-1	APMW-1	Total Recoverable	Water	3005A	
400-152827-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-152827-1 - RA	APMW-1	Total Recoverable	Water	3005A	
400-152827-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-152827-2	APMW-2	Total Recoverable	Water	3005A	
400-152827-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-152827-3	APMW-3	Total Recoverable	Water	3005A	
400-152827-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-152827-4	APMW-4	Total Recoverable	Water	3005A	
400-152827-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-152827-5	APMW-5	Total Recoverable	Water	3005A	
400-152827-6	APMW-6	Total Recoverable	Water	3005A	
400-152827-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-152827-7	APMW-7	Total Recoverable	Water	3005A	
400-152827-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-152827-8	APMW-8	Total Recoverable	Water	3005A	
400-152827-9	APMW-9	Total Recoverable	Water	3005A	
400-152827-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-152827-10	APMW-10	Total Recoverable	Water	3005A	
400-152827-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-152827-11	DUP-01	Total Recoverable	Water	3005A	
400-152827-12	DUP-02	Total Recoverable	Water	3005A	
400-152827-12 - DL	DUP-02	Total Recoverable	Water	3005A	
MB 400-396415/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-396415/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-152827-2 MS	APMW-2	Total Recoverable	Water	3005A	
400-152827-2 MSD	APMW-2	Total Recoverable	Water	3005A	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 396639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Dissolved	Water	6020	396415
400-152827-1	APMW-1	Total Recoverable	Water	6020	396415
400-152827-2	APMW-2	Total Recoverable	Water	6020	396415
400-152827-3	APMW-3	Total Recoverable	Water	6020	396415
400-152827-4	APMW-4	Total Recoverable	Water	6020	396415
400-152827-5	APMW-5	Total Recoverable	Water	6020	396415
400-152827-6	APMW-6	Total Recoverable	Water	6020	396415
400-152827-7	APMW-7	Total Recoverable	Water	6020	396415
400-152827-8	APMW-8	Total Recoverable	Water	6020	396415
400-152827-9	APMW-9	Total Recoverable	Water	6020	396415
400-152827-10	APMW-10	Total Recoverable	Water	6020	396415
400-152827-11	DUP-01	Total Recoverable	Water	6020	396415
400-152827-12	DUP-02	Total Recoverable	Water	6020	396415
MB 400-396415/1-A ^5	Method Blank	Total Recoverable	Water	6020	396415
LCS 400-396415/2-A	Lab Control Sample	Total Recoverable	Water	6020	396415
400-152827-2 MS	APMW-2	Total Recoverable	Water	6020	396415
400-152827-2 MSD	APMW-2	Total Recoverable	Water	6020	396415

Analysis Batch: 396716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Dissolved	Water	7470A	396360
400-152827-1	APMW-1	Total/NA	Water	7470A	396360
400-152827-2	APMW-2	Total/NA	Water	7470A	396360
400-152827-3	APMW-3	Total/NA	Water	7470A	396360
400-152827-4	APMW-4	Total/NA	Water	7470A	396360
400-152827-5	APMW-5	Total/NA	Water	7470A	396360
400-152827-6	APMW-6	Total/NA	Water	7470A	396360
400-152827-7	APMW-7	Total/NA	Water	7470A	396360
400-152827-8	APMW-8	Total/NA	Water	7470A	396360
400-152827-9	APMW-9	Total/NA	Water	7470A	396360
400-152827-10	APMW-10	Total/NA	Water	7470A	396360
400-152827-11	DUP-01	Total/NA	Water	7470A	396360
400-152827-12	DUP-02	Total/NA	Water	7470A	396360
MB 400-396360/14-A	Method Blank	Total/NA	Water	7470A	396360
LCS 400-396360/15-A	Lab Control Sample	Total/NA	Water	7470A	396360
400-152827-1 MS	APMW-1	Total/NA	Water	7470A	396360
400-152827-1 MSD	APMW-1	Total/NA	Water	7470A	396360

Analysis Batch: 396765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1 - RA	APMW-1	Dissolved	Water	6020	396415
400-152827-1 - DL	APMW-1	Dissolved	Water	6020	396415
400-152827-1 - RA	APMW-1	Total Recoverable	Water	6020	396415
400-152827-1 - DL	APMW-1	Total Recoverable	Water	6020	396415
400-152827-2 - DL	APMW-2	Total Recoverable	Water	6020	396415
400-152827-3 - DL	APMW-3	Total Recoverable	Water	6020	396415
400-152827-4 - DL	APMW-4	Total Recoverable	Water	6020	396415
400-152827-5 - DL	APMW-5	Total Recoverable	Water	6020	396415
400-152827-6 - DL	APMW-6	Total Recoverable	Water	6020	396415
400-152827-8 - DL	APMW-8	Total Recoverable	Water	6020	396415
400-152827-9 - DL	APMW-9	Total Recoverable	Water	6020	396415

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 396765 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-11 - DL	DUP-01	Total Recoverable	Water	6020	396415
400-152827-12 - DL	DUP-02	Total Recoverable	Water	6020	396415

General Chemistry

Analysis Batch: 395731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	SM 2540C	
400-152827-2	APMW-2	Total/NA	Water	SM 2540C	
400-152827-3	APMW-3	Total/NA	Water	SM 2540C	
400-152827-4	APMW-4	Total/NA	Water	SM 2540C	
400-152827-5	APMW-5	Total/NA	Water	SM 2540C	
400-152827-6	APMW-6	Total/NA	Water	SM 2540C	
400-152827-7	APMW-7	Total/NA	Water	SM 2540C	
400-152827-8	APMW-8	Total/NA	Water	SM 2540C	
400-152827-9	APMW-9	Total/NA	Water	SM 2540C	
400-152827-10	APMW-10	Total/NA	Water	SM 2540C	
400-152827-11	DUP-01	Total/NA	Water	SM 2540C	
400-152827-12	DUP-02	Total/NA	Water	SM 2540C	
MB 400-395731/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-395731/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-152827-7 DU	APMW-7	Total/NA	Water	SM 2540C	

Analysis Batch: 396150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-152827-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-152827-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-152827-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-152827-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
400-152827-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-152827-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-152827-8	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-152827-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	
400-152827-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-152827-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-152827-12	DUP-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-396150/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-396150/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-396150/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-152955-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-152955-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 396183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-152827-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-152827-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-152827-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-152827-5	APMW-5	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 396183 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-152827-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-152827-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-152827-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-152827-11	DUP-01	Total/NA	Water	SM 4500 F C	
MB 400-396183/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-396183/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-152595-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-152595-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-152827-3 DU	APMW-3	Total/NA	Water	SM 4500 F C	

Analysis Batch: 396324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-152827-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-152827-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-152827-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-152827-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-396324/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-396324/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-396324/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
480-134861-D-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
480-134861-D-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 396332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-10	APMW-10	Total/NA	Water	SM 4500 F C	
400-152827-12	DUP-02	Total/NA	Water	SM 4500 F C	
MB 400-396332/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-396332/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-152955-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-152955-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-152955-A-8 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 396576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-152827-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-152827-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-152827-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-152827-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-152827-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-152827-12	DUP-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-396576/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-396576/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-396576/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
480-134861-D-9 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
480-134861-D-9 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Field Service / Mobile Lab

Analysis Batch: 398500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	Field Sampling	
400-152827-2	APMW-2	Total/NA	Water	Field Sampling	
400-152827-3	APMW-3	Total/NA	Water	Field Sampling	
400-152827-4	APMW-4	Total/NA	Water	Field Sampling	
400-152827-5	APMW-5	Total/NA	Water	Field Sampling	
400-152827-6	APMW-6	Total/NA	Water	Field Sampling	
400-152827-7	APMW-7	Total/NA	Water	Field Sampling	
400-152827-8	APMW-8	Total/NA	Water	Field Sampling	
400-152827-9	APMW-9	Total/NA	Water	Field Sampling	
400-152827-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-396415/1-A ^5
Matrix: Water
Analysis Batch: 396639

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 396415

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 14:07	5
Arsenic, Dissolved	<0.00046		0.0013	0.00046	mg/L		05/04/18 08:42	05/04/18 14:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 14:07	5
Barium, Dissolved	<0.00049		0.0025	0.00049	mg/L		05/04/18 08:42	05/04/18 14:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 14:07	5
Beryllium, Dissolved	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 14:07	5
Boron	<0.021		0.050	0.021	mg/L		05/04/18 08:42	05/04/18 14:07	5
Boron, Dissolved	<0.021		0.050	0.021	mg/L		05/04/18 08:42	05/04/18 14:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 14:07	5
Cadmium, Dissolved	<0.00034		0.0025	0.00034	mg/L		05/04/18 08:42	05/04/18 14:07	5
Calcium	<0.13		0.25	0.13	mg/L		05/04/18 08:42	05/04/18 14:07	5
Calcium, Dissolved	<0.13		0.25	0.13	mg/L		05/04/18 08:42	05/04/18 14:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 14:07	5
Chromium, Dissolved	<0.0011		0.0025	0.0011	mg/L		05/04/18 08:42	05/04/18 14:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 14:07	5
Cobalt, Dissolved	<0.00040		0.0025	0.00040	mg/L		05/04/18 08:42	05/04/18 14:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 14:07	5
Lead, Dissolved	<0.00035		0.0013	0.00035	mg/L		05/04/18 08:42	05/04/18 14:07	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 14:07	5
Antimony, Dissolved	<0.0010		0.0025	0.0010	mg/L		05/04/18 08:42	05/04/18 14:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 14:07	5
Molybdenum, Dissolved	<0.00085		0.015	0.00085	mg/L		05/04/18 08:42	05/04/18 14:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 14:07	5
Selenium, Dissolved	<0.00024		0.0013	0.00024	mg/L		05/04/18 08:42	05/04/18 14:07	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 14:07	5
Lithium, Dissolved	<0.0011		0.0050	0.0011	mg/L		05/04/18 08:42	05/04/18 14:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 14:07	5
Thallium, Dissolved	<0.000085		0.00050	0.000085	mg/L		05/04/18 08:42	05/04/18 14:07	5

Lab Sample ID: LCS 400-396415/2-A
Matrix: Water
Analysis Batch: 396639

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 396415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0525		mg/L		105	80 - 120
Arsenic, Dissolved	0.0500	0.0525		mg/L		105	80 - 120
Barium	0.0500	0.0491		mg/L		98	80 - 120
Barium, Dissolved	0.0500	0.0491		mg/L		98	80 - 120
Beryllium	0.0500	0.0499		mg/L		100	80 - 120
Beryllium, Dissolved	0.0500	0.0499		mg/L		100	80 - 120
Boron	0.100	0.0993		mg/L		99	80 - 120
Boron, Dissolved	0.100	0.0993		mg/L		99	80 - 120
Cadmium	0.0500	0.0507		mg/L		101	80 - 120
Cadmium, Dissolved	0.0500	0.0507		mg/L		101	80 - 120
Calcium	5.00	5.16		mg/L		103	80 - 120
Calcium, Dissolved	5.00	5.16		mg/L		103	80 - 120
Chromium	0.0500	0.0525		mg/L		105	80 - 120
Chromium, Dissolved	0.0500	0.0525		mg/L		105	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-396415/2-A
Matrix: Water
Analysis Batch: 396639

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 396415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0516		mg/L		103	80 - 120
Cobalt, Dissolved	0.0500	0.0516		mg/L		103	80 - 120
Lead	0.0500	0.0505		mg/L		101	80 - 120
Lead, Dissolved	0.0500	0.0505		mg/L		101	80 - 120
Antimony	0.0500	0.0543		mg/L		109	80 - 120
Antimony, Dissolved	0.0500	0.0543		mg/L		109	80 - 120
Molybdenum	0.0500	0.0512		mg/L		102	80 - 120
Molybdenum, Dissolved	0.0500	0.0512		mg/L		102	80 - 120
Selenium	0.0500	0.0490		mg/L		98	80 - 120
Selenium, Dissolved	0.0500	0.0490		mg/L		98	80 - 120
Lithium	0.0500	0.0506		mg/L		101	80 - 120
Lithium, Dissolved	0.0500	0.0506		mg/L		101	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120
Thallium, Dissolved	0.0100	0.0100		mg/L		100	80 - 120

Lab Sample ID: 400-152827-2 MS
Matrix: Water
Analysis Batch: 396639

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 396415

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00077	J	0.0500	0.0541		mg/L		107	75 - 125
Arsenic, Dissolved	0.00077	J	0.0500	0.0541		mg/L		107	75 - 125
Barium	2.8		0.0500	2.81	4	mg/L		15	75 - 125
Barium, Dissolved	2.8		0.0500	2.81	4	mg/L		15	75 - 125
Beryllium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125
Beryllium, Dissolved	<0.00034		0.0500	0.0517		mg/L		103	75 - 125
Boron	3.4	E	0.100	3.40	E 4	mg/L		38	75 - 125
Boron, Dissolved	3.4	E	0.100	3.40	E 4	mg/L		38	75 - 125
Cadmium	<0.00034		0.0500	0.0488		mg/L		98	75 - 125
Cadmium, Dissolved	<0.00034		0.0500	0.0488		mg/L		98	75 - 125
Calcium	300	E	5.00	307	E 4	mg/L		131	75 - 125
Calcium, Dissolved	300	E	5.00	307	E 4	mg/L		131	75 - 125
Chromium	<0.0011		0.0500	0.0515		mg/L		103	75 - 125
Chromium, Dissolved	<0.0011		0.0500	0.0515		mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0490		mg/L		98	75 - 125
Cobalt, Dissolved	<0.00040		0.0500	0.0490		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0490		mg/L		98	75 - 125
Lead, Dissolved	<0.00035		0.0500	0.0490		mg/L		98	75 - 125
Antimony	<0.0010		0.0500	0.0538		mg/L		108	75 - 125
Antimony, Dissolved	<0.0010		0.0500	0.0538		mg/L		108	75 - 125
Molybdenum	<0.00085		0.0500	0.0517		mg/L		103	75 - 125
Molybdenum, Dissolved	<0.00085		0.0500	0.0517		mg/L		103	75 - 125
Selenium	<0.00024		0.0500	0.0505		mg/L		101	75 - 125
Selenium, Dissolved	<0.00024		0.0500	0.0505		mg/L		101	75 - 125
Lithium	0.029	F1	0.0500	0.0939	F1	mg/L		130	75 - 125
Lithium, Dissolved	0.029	F1	0.0500	0.0939	F1	mg/L		130	75 - 125
Thallium	<0.000085		0.0100	0.00971		mg/L		97	75 - 125
Thallium, Dissolved	<0.000085		0.0100	0.00971		mg/L		97	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-152827-2 MSD

Matrix: Water

Analysis Batch: 396639

Client Sample ID: APMW-2

Prep Type: Total Recoverable

Prep Batch: 396415

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
Arsenic	0.00077	J	0.0500	0.0556		mg/L		110	75 - 125	3	20
Arsenic, Dissolved	0.00077	J	0.0500	0.0556		mg/L		110	75 - 125	3	20
Barium	2.8		0.0500	2.97	4	mg/L		344	75 - 125	6	20
Barium, Dissolved	2.8		0.0500	2.97	4	mg/L		344	75 - 125	6	20
Beryllium	<0.00034		0.0500	0.0542		mg/L		108	75 - 125	5	20
Beryllium, Dissolved	<0.00034		0.0500	0.0542		mg/L		108	75 - 125	5	20
Boron	3.4	E	0.100	3.53	E 4	mg/L		167	75 - 125	4	20
Boron, Dissolved	3.4	E	0.100	3.53	E 4	mg/L		167	75 - 125	4	20
Cadmium	<0.00034		0.0500	0.0504		mg/L		101	75 - 125	3	20
Cadmium, Dissolved	<0.00034		0.0500	0.0504		mg/L		101	75 - 125	3	20
Calcium	300	E	5.00	320	E 4	mg/L		383	75 - 125	4	20
Calcium, Dissolved	300	E	5.00	320	E 4	mg/L		383	75 - 125	4	20
Chromium	<0.0011		0.0500	0.0526		mg/L		105	75 - 125	2	20
Chromium, Dissolved	<0.0011		0.0500	0.0526		mg/L		105	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0512		mg/L		102	75 - 125	4	20
Cobalt, Dissolved	<0.00040		0.0500	0.0512		mg/L		102	75 - 125	4	20
Lead	<0.00035		0.0500	0.0522		mg/L		104	75 - 125	6	20
Lead, Dissolved	<0.00035		0.0500	0.0522		mg/L		104	75 - 125	6	20
Antimony	<0.0010		0.0500	0.0559		mg/L		112	75 - 125	4	20
Antimony, Dissolved	<0.0010		0.0500	0.0559		mg/L		112	75 - 125	4	20
Molybdenum	<0.00085		0.0500	0.0540		mg/L		108	75 - 125	4	20
Molybdenum, Dissolved	<0.00085		0.0500	0.0540		mg/L		108	75 - 125	4	20
Selenium	<0.00024		0.0500	0.0525		mg/L		105	75 - 125	4	20
Selenium, Dissolved	<0.00024		0.0500	0.0525		mg/L		105	75 - 125	4	20
Lithium	0.029	F1	0.0500	0.0961	F1	mg/L		134	75 - 125	2	20
Lithium, Dissolved	0.029	F1	0.0500	0.0961	F1	mg/L		134	75 - 125	2	20
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125	5	20
Thallium, Dissolved	<0.00085		0.0100	0.0102		mg/L		102	75 - 125	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-396360/14-A

Matrix: Water

Analysis Batch: 396716

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 396360

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 10:47	1
Mercury, Dissolved	<0.000070		0.00020	0.000070	mg/L		05/06/18 13:22	05/07/18 10:47	1

Lab Sample ID: LCS 400-396360/15-A

Matrix: Water

Analysis Batch: 396716

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 396360

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Mercury	0.00101	0.000972		mg/L		97	80 - 120
Mercury, Dissolved	0.00101	0.000972		mg/L		97	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-152827-1 MS
Matrix: Water
Analysis Batch: 396716

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 396360

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	<0.000070	F1	0.00201	0.00132	F1	mg/L		65	80 - 120
Mercury, Dissolved	<0.000070	F1	0.00201	0.00132	F1	mg/L		65	80 - 120

Lab Sample ID: 400-152827-1 MSD
Matrix: Water
Analysis Batch: 396716

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 396360

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Mercury	<0.000070	F1	0.00201	0.00126	F1	mg/L		62	80 - 120	5	20
Mercury, Dissolved	<0.000070	F1	0.00201	0.00126	F1	mg/L		62	80 - 120	5	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-395731/1
Matrix: Water
Analysis Batch: 395731

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			04/29/18 13:11	1

Lab Sample ID: LCS 400-395731/2
Matrix: Water
Analysis Batch: 395731

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Total Dissolved Solids	293	250		mg/L		85	78 - 122

Lab Sample ID: 400-152827-7 DU
Matrix: Water
Analysis Batch: 395731

Client Sample ID: APMW-7
Prep Type: Total/NA

Analyte	Sample	Sample	DU DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	7500		7500		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-396150/6
Matrix: Water
Analysis Batch: 396150

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.60		2.0	0.60	mg/L			05/02/18 10:08	1

Lab Sample ID: LCS 400-396150/7
Matrix: Water
Analysis Batch: 396150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Chloride	30.0	31.7		mg/L		106	90 - 110

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Lab Sample ID: MRL 400-396150/3
Matrix: Water
Analysis Batch: 396150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.52	J	mg/L		76	50 - 150

Lab Sample ID: 400-152955-A-1 MS
Matrix: Water
Analysis Batch: 396150

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.9		10.0	16.4		mg/L		105	73 - 120

Lab Sample ID: 400-152955-A-1 MSD
Matrix: Water
Analysis Batch: 396150

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.9		10.0	16.0		mg/L		101	73 - 120	2	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-396183/3
Matrix: Water
Analysis Batch: 396183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			05/02/18 14:41	1

Lab Sample ID: LCS 400-396183/4
Matrix: Water
Analysis Batch: 396183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.84		mg/L		96	90 - 110

Lab Sample ID: 400-152595-B-1 MS
Matrix: Water
Analysis Batch: 396183

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.88	F1	1.00	1.56	F1	mg/L		68	75 - 125

Lab Sample ID: 400-152595-B-1 MSD
Matrix: Water
Analysis Batch: 396183

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.88	F1	1.00	1.56	F1	mg/L		68	75 - 125	0	4

Lab Sample ID: 400-152827-3 DU
Matrix: Water
Analysis Batch: 396183

Client Sample ID: APMW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.33		0.340		mg/L		3	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Lab Sample ID: MB 400-396332/3
Matrix: Water
Analysis Batch: 396332

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			05/03/18 12:35	1

Lab Sample ID: LCS 400-396332/4
Matrix: Water
Analysis Batch: 396332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.84		mg/L		96	90 - 110

Lab Sample ID: 400-152955-A-1 MS
Matrix: Water
Analysis Batch: 396332

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.070	J	1.00	1.08		mg/L		101	75 - 125

Lab Sample ID: 400-152955-A-1 MSD
Matrix: Water
Analysis Batch: 396332

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.070	J	1.00	1.08		mg/L		101	75 - 125	0	4

Lab Sample ID: 400-152955-A-8 DU
Matrix: Water
Analysis Batch: 396332

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-396324/6
Matrix: Water
Analysis Batch: 396324

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			05/03/18 07:58	1

Lab Sample ID: LCS 400-396324/7
Matrix: Water
Analysis Batch: 396324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.1		mg/L		101	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-396324/3
Matrix: Water
Analysis Batch: 396324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.07	J	mg/L		81	50 - 150

Lab Sample ID: 480-134861-D-3 MS
Matrix: Water
Analysis Batch: 396324

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1 F2	10.0	9.72		mg/L		97	77 - 128

Lab Sample ID: 480-134861-D-3 MSD
Matrix: Water
Analysis Batch: 396324

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F1 F2	10.0	18.4	F1 F2	mg/L		184	77 - 128	62	5

Lab Sample ID: MB 400-396576/6
Matrix: Water
Analysis Batch: 396576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			05/06/18 08:57	1

Lab Sample ID: LCS 400-396576/7
Matrix: Water
Analysis Batch: 396576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.7		mg/L		98	90 - 110

Lab Sample ID: MRL 400-396576/3
Matrix: Water
Analysis Batch: 396576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	3.80	J	mg/L		76	50 - 150

Lab Sample ID: 480-134861-D-9 MS
Matrix: Water
Analysis Batch: 396576

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2.6	J	10.0	13.4		mg/L		108	77 - 128

Lab Sample ID: 480-134861-D-9 MSD
Matrix: Water
Analysis Batch: 396576

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2.6	J	10.0	13.3		mg/L		107	77 - 128	1	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

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Chain of Custody Record

Client Information Sampler: <i>Kick Heyendawfer</i> Lab PM: Whitmire, Cheyenne R Phone: <i>850-336-0192</i> E-Mail: cheyenne.whitmire@testamericainc.com Company: Southern Company		Carrier Tracking No(s): COC No: 400-73764-29084.1 Page: Page 1 of 2 Job #:										
Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: Ash Pond		Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSO#:										
Sample Identification		Analysis Requested										
Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, O-matrix, etc)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 - Sb,As,Ba,Bi,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Tl,7470A -Hg	4500 F.C - Fluoride, 2540C - TDS	SM4500 Cl ⁻ Chloride, SM4500 SO ₄ ⁻² Sulfate, 9315 Ra226, 9320 Ra228, Ra226Ra228 GPPC	Total Number of containers	Special Instructions/Note:
APMW-1	4-24-18	1210	G	Water		X	X	X	X	X	3	
APMW-2	4-24-18	1426	G	Water		X	X	X	X	X	3	
APMW-3	4-24-18	1544	G	Water		X	X	X	X	X	3	
APMW-4	4-24-18	1741	G	Water		X	X	X	X	X	3	
APMW-5	4-25-18	0908	G	Water		X	X	X	X	X	3	
APMW-6	4-25-18	1042	G	Water		X	X	X	X	X	3	
APMW-7	4-25-18	1252	G	Water		X	X	X	X	X	3	
APMW-8	4-25-18	1421	G	Water		X	X	X	X	X	3	
APMW-9	4-25-18	1640	G	Water		X	X	X	X	X	3	
APMW-10	4-25-18	1737	G	Water		X	X	X	X	X	3	
DUP-01												
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological												
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)												
Empty Kit Relinquished by:												
Relinquished by: <i>[Signature]</i> Date: 4-26-18 Time: 0845 Company: <i>[Signature]</i>												
Relinquished by: <i>[Signature]</i> Date: 4-26-18 Time: 0845 Company: <i>[Signature]</i>												
Relinquished by: <i>[Signature]</i> Date: 4-26-18 Time: 0845 Company: <i>[Signature]</i>												
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: <i>6.0°C, 0.0°C, IR7</i>												

Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Company: <u>Southern Company</u> Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CSSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Watson</u> Site: <u>Ash Pond</u>		Lab PM: <u>Whitmore, Chylene R</u> E-Mail: <u>chylene.whitmore@testamericainc.com</u> Carrier Tracking No(s): Lab No: <u>400-73764-29084.2</u> Page: <u>Page 2 of 2</u> Job #:	
Due Date Requested: TAT Requested (days): PO #: <u>SCS10347656</u> WO #: <u>40009375</u> Project #: <u>40009375</u> SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Tl,7470A -Hg 4500 F, C - Fluoride, 2540C - TDS SM4500 Cl - Chloride, SM4500 SO4 - Sulfate, 9315 Ra226, 9320 Ra228, Ra226Ra228, GFPC Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification <u>DUP-02</u> Sample Date: <u>4-25-18</u> Sample Time: <u>1321</u> Sample Type (C=Comp, G=grab): <u>G</u> Matrix (W=water, S=solid, O=wastefoil, BT= tissue, A=air) Water Water Water		Total Number of containers: <u>3</u> Special Instructions/Note: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Method of Shipment: Date/Time: <u>4-26-18</u> Received by: <u>[Signature]</u> Company: <u>0845 PSHEM</u>	
Empty Kit Relinquished by: Date/Time: <u>4-26-18</u> Relinquished by: <u>[Signature]</u> Company:		Date/Time: <u>4-26-18 0845</u> Received by: <u>[Signature]</u> Company:	
Relinquished by: Date/Time:		Date/Time:	
Relinquished by: Date/Time:		Date/Time:	
Relinquished by: Date/Time:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: <u>0.0°C, 0.0°C, 0.0°C, TR7</u>	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-152827-1

SDG Number: Ash Pond

Login Number: 152827

List Number: 1

Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	FF Bottle received for sample APMW-1, not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	06-30-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-18

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-152827-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

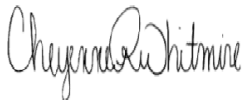
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

5/30/2018 2:13:03 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Job ID: 400-152827-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-152827-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-363752. Insufficient sample volume was available to preform a sample duplicate (DUP) for the following samples: APMW-1 (400-152827-1), APMW-2 (400-152827-2), APMW-3 (400-152827-3), APMW-4 (400-152827-4), APMW-5 (400-152827-5), APMW-6 (400-152827-6), APMW-7 (400-152827-7), APMW-8 (400-152827-8), APMW-9 (400-152827-9), APMW-10 (400-152827-10), DUP-01 (400-152827-11) and DUP-02 (400-152827-12) A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium Prep Batch 160-363745. Insufficient sample volume was available to preform a sample duplicate (DUP) for the following samples: APMW-1 (400-152827-1), APMW-2 (400-152827-2), APMW-3 (400-152827-3), APMW-4 (400-152827-4), APMW-5 (400-152827-5), APMW-6 (400-152827-6), APMW-7 (400-152827-7), APMW-8 (400-152827-8), APMW-9 (400-152827-9), APMW-10 (400-152827-10), DUP-01 (400-152827-11) and DUP-02 (400-152827-12) A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.



Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-152827-1	APMW-1	Water	04/24/18 12:10	04/26/18 08:45
400-152827-2	APMW-2	Water	04/24/18 14:26	04/26/18 08:45
400-152827-3	APMW-3	Water	04/24/18 15:44	04/26/18 08:45
400-152827-4	APMW-4	Water	04/24/18 17:41	04/26/18 08:45
400-152827-5	APMW-5	Water	04/25/18 08:08	04/26/18 08:45
400-152827-6	APMW-6	Water	04/25/18 10:42	04/26/18 08:45
400-152827-7	APMW-7	Water	04/25/18 12:52	04/26/18 08:45
400-152827-8	APMW-8	Water	04/25/18 14:21	04/26/18 08:45
400-152827-9	APMW-9	Water	04/25/18 16:40	04/26/18 08:45
400-152827-10	APMW-10	Water	04/25/18 17:37	04/26/18 08:45
400-152827-11	DUP-01	Water	04/24/18 16:41	04/26/18 08:45
400-152827-12	DUP-02	Water	04/25/18 13:21	04/26/18 08:45

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-152827-1

Date Collected: 04/24/18 12:10

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.00		0.272	0.383	1.00	0.0790	pCi/L	05/03/18 09:42	05/25/18 09:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					05/03/18 09:42	05/25/18 09:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.09		0.366	0.464	1.00	0.287	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	87.5		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.08		0.456	0.602	5.00	0.287	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-152827-2

Date Collected: 04/24/18 14:26

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	14.8		0.592	1.46	1.00	0.0673	pCi/L	05/03/18 09:42	05/25/18 17:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/03/18 09:42	05/25/18 17:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	7.00		0.563	0.855	1.00	0.361	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	78.5		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	21.8		0.817	1.69	5.00	0.361	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-152827-3

Date Collected: 04/24/18 15:44

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.568		0.122	0.132	1.00	0.0738	pCi/L	05/03/18 09:42	05/25/18 17:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 09:42	05/25/18 17:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.27		0.465	0.672	1.00	0.305	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	89.0		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.84		0.481	0.685	5.00	0.305	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-152827-4

Date Collected: 04/24/18 17:41

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.856		0.149	0.168	1.00	0.0803	pCi/L	05/03/18 09:42	05/25/18 17:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/03/18 09:42	05/25/18 17:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.55		0.311	0.342	1.00	0.327	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	80.7		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.40		0.345	0.381	5.00	0.327	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-152827-5

Date Collected: 04/25/18 08:08

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.473		0.114	0.122	1.00	0.0803	pCi/L	05/03/18 09:42	05/25/18 17:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/03/18 09:42	05/25/18 17:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.20		0.408	0.503	1.00	0.348	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	79.6		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.67		0.424	0.518	5.00	0.348	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-152827-6

Date Collected: 04/25/18 10:42

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.662		0.140	0.152	1.00	0.0892	pCi/L	05/03/18 09:42	05/25/18 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 09:42	05/25/18 17:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.45		0.297	0.326	1.00	0.341	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	87.9		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.11		0.328	0.360	5.00	0.341	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-152827-7

Date Collected: 04/25/18 12:52

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.64		0.274	0.363	1.00	0.0914	pCi/L	05/03/18 09:42	05/25/18 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 09:42	05/25/18 17:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.17		0.424	0.514	1.00	0.406	pCi/L	05/03/18 10:32	05/14/18 08:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 10:32	05/14/18 08:54	1
Y Carrier	77.0		40 - 110					05/03/18 10:32	05/14/18 08:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.80		0.505	0.629	5.00	0.406	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-152827-8

Date Collected: 04/25/18 14:21

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.02		0.176	0.199	1.00	0.102	pCi/L	05/03/18 09:42	05/25/18 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 09:42	05/25/18 17:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.24		0.329	0.389	1.00	0.299	pCi/L	05/03/18 10:32	05/14/18 08:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 10:32	05/14/18 08:55	1
Y Carrier	86.0		40 - 110					05/03/18 10:32	05/14/18 08:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.26		0.373	0.437	5.00	0.299	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-152827-9

Date Collected: 04/25/18 16:40

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.28		0.256	0.328	1.00	0.0998	pCi/L	05/03/18 09:42	05/25/18 17:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 09:42	05/25/18 17:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.21		0.438	0.585	1.00	0.325	pCi/L	05/03/18 10:32	05/14/18 08:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 10:32	05/14/18 08:55	1
Y Carrier	83.7		40 - 110					05/03/18 10:32	05/14/18 08:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.49		0.507	0.671	5.00	0.325	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-152827-10

Date Collected: 04/25/18 17:37

Matrix: Water

Date Received: 04/26/18 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.44		0.201	0.239	1.00	0.0803	pCi/L	05/03/18 09:42	05/25/18 17:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 09:42	05/25/18 17:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.23		0.272	0.295	1.00	0.308	pCi/L	05/03/18 10:32	05/14/18 08:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/03/18 10:32	05/14/18 08:55	1
Y Carrier	87.9		40 - 110					05/03/18 10:32	05/14/18 08:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.66		0.338	0.380	5.00	0.308	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 04/24/18 16:41
Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.802		0.153	0.169	1.00	0.0879	pCi/L	05/03/18 09:42	05/25/18 17:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/18 09:42	05/25/18 17:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.56		0.312	0.343	1.00	0.339	pCi/L	05/03/18 10:32	05/14/18 08:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/03/18 10:32	05/14/18 08:59	1
Y Carrier	83.4		40 - 110					05/03/18 10:32	05/14/18 08:59	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.37		0.347	0.382	5.00	0.339	pCi/L		05/30/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: DUP-02

Date Collected: 04/25/18 13:21

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-12

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.978		0.163	0.186	1.00	0.0736	pCi/L	05/03/18 09:42	05/25/18 17:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/03/18 09:42	05/25/18 17:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.17		0.354	0.407	1.00	0.358	pCi/L	05/03/18 10:32	05/14/18 08:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/03/18 10:32	05/14/18 08:59	1
Y Carrier	78.9		40 - 110					05/03/18 10:32	05/14/18 08:59	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.15		0.390	0.447	5.00	0.358	pCi/L		05/30/18 13:21	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 04/24/18 12:10

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367435	05/25/18 09:51	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-2

Date Collected: 04/24/18 14:26

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367435	05/25/18 17:11	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-3

Date Collected: 04/24/18 15:44

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367435	05/25/18 17:11	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-4

Date Collected: 04/24/18 17:41

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367435	05/25/18 17:11	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-5

Date Collected: 04/25/18 08:08

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367435	05/25/18 17:11	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-6

Date Collected: 04/25/18 10:42

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:17	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-7

Date Collected: 04/25/18 12:52

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:17	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:54	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-8

Date Collected: 04/25/18 14:21

Date Received: 04/26/18 08:45

Lab Sample ID: 400-152827-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:17	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-152827-9

Date Collected: 04/25/18 16:40

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:18	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-152827-10

Date Collected: 04/25/18 17:37

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:18	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365393	05/14/18 08:55	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-152827-11

Date Collected: 04/24/18 16:41

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:18	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365588	05/14/18 08:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-152827-12

Date Collected: 04/25/18 13:21

Matrix: Water

Date Received: 04/26/18 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			363745	05/03/18 09:42	ABB	TAL SL
Total/NA	Analysis	9315		1	367554	05/25/18 17:18	ALS	TAL SL
Total/NA	Prep	PrecSep_0			363752	05/03/18 10:32	ABB	TAL SL
Total/NA	Analysis	9320		1	365588	05/14/18 08:59	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	368075	05/30/18 13:21	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
 SDG: Ash Pond

Rad

Prep Batch: 363745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	PrecSep-21	
400-152827-2	APMW-2	Total/NA	Water	PrecSep-21	
400-152827-3	APMW-3	Total/NA	Water	PrecSep-21	
400-152827-4	APMW-4	Total/NA	Water	PrecSep-21	
400-152827-5	APMW-5	Total/NA	Water	PrecSep-21	
400-152827-6	APMW-6	Total/NA	Water	PrecSep-21	
400-152827-7	APMW-7	Total/NA	Water	PrecSep-21	
400-152827-8	APMW-8	Total/NA	Water	PrecSep-21	
400-152827-9	APMW-9	Total/NA	Water	PrecSep-21	
400-152827-10	APMW-10	Total/NA	Water	PrecSep-21	
400-152827-11	DUP-01	Total/NA	Water	PrecSep-21	
400-152827-12	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-363745/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-363745/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-363745/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 363752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-152827-1	APMW-1	Total/NA	Water	PrecSep_0	
400-152827-2	APMW-2	Total/NA	Water	PrecSep_0	
400-152827-3	APMW-3	Total/NA	Water	PrecSep_0	
400-152827-4	APMW-4	Total/NA	Water	PrecSep_0	
400-152827-5	APMW-5	Total/NA	Water	PrecSep_0	
400-152827-6	APMW-6	Total/NA	Water	PrecSep_0	
400-152827-7	APMW-7	Total/NA	Water	PrecSep_0	
400-152827-8	APMW-8	Total/NA	Water	PrecSep_0	
400-152827-9	APMW-9	Total/NA	Water	PrecSep_0	
400-152827-10	APMW-10	Total/NA	Water	PrecSep_0	
400-152827-11	DUP-01	Total/NA	Water	PrecSep_0	
400-152827-12	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-363752/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-363752/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-363752/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-363745/23-A
Matrix: Water
Analysis Batch: 367554

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363745

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03981	U	0.0491	0.0492	1.00	0.0805	pCi/L	05/03/18 09:42	05/25/18 17:18	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 09:42	05/25/18 17:18	1

Lab Sample ID: LCS 160-363745/1-A
Matrix: Water
Analysis Batch: 367435

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363745

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	11.04		1.11	1.00	0.0720	pCi/L	94	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

Lab Sample ID: LCSD 160-363745/2-A
Matrix: Water
Analysis Batch: 367435

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363745

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.8	10.55		1.08	1.00	0.0793	pCi/L	89	68 - 137	0.22	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-363752/23-A
Matrix: Water
Analysis Batch: 365588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363752

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1387	U	0.169	0.169	1.00	0.330	pCi/L	05/03/18 10:32	05/14/18 08:59	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/03/18 10:32	05/14/18 08:59	1
Y Carrier	87.1		40 - 110					05/03/18 10:32	05/14/18 08:59	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-363752/1-A
Matrix: Water
Analysis Batch: 365393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363752

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.31	8.122		0.942	1.00	0.322	pCi/L	98	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	85.2		40 - 110

Lab Sample ID: LCSD 160-363752/2-A
Matrix: Water
Analysis Batch: 365393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 363752

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	8.31	8.371		0.967	1.00	0.316	pCi/L	101	56 - 140	0.13	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	86.0		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-152955-A-5 DU
Matrix: Water
Analysis Batch: 368075

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.463	U	0.2240	U	0.321	5.00	0.545	pCi/L	0.33	

Chain of Custody Record

Client Information Lab PM: Whitmire, Cheyenne R Carrier Tracking No(s): 400-73764-29084.1 Phone: cheyenne.whitmire@testamericainc.com E-Mail: cheyenne.whitmire@testamericainc.com Job #: Page 1 of 2																																																																																																																																																													
Sampler: <i>Kick Heyendawfer</i> Phone: 850-336-0192 Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR - Plant Watson SOW#: Ash Pond																																																																																																																																																													
Analysis Requested Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SOW#:																																																																																																																																																													
Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9315 Ra226, 9320 Ra228, Ra226Ra228 GPPC SM4500 Cl-E Chloride, SM4500 SO4-E Sulfate, 4500 F.C Fluoride, 2540C-TDS 6020-Sb,As,Ba,Ba,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A-Hg																																																																																																																																																													
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:																																																																																																																																																													
M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)																																																																																																																																																													
Special Instructions/Note: Total Number of containers:																																																																																																																																																													
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APMW-2	4-24-18	1426	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-3	4-24-18	1544	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-4	4-24-18	1741	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-5	4-25-18	0908	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-6	4-25-18	1042	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-7	4-25-18	1252	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-8	4-25-18	1421	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
APMW-9	4-25-18	1640	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X	X	X	3																																																																																																																																																		
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Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																																																																																																																																													
Special Instructions/QC Requirements:																																																																																																																																																													
Method of Shipment:																																																																																																																																																													
Cooler Temperature(s) °C and Other Remarks: 6.0°C, 0.0°C, 0.0°C IR7																																																																																																																																																													



Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Company: <u>Southern Company</u> Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CSSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Watson</u> Site: <u>Ash Pond</u>		Lab PM: <u>Whitmore, Chyenne R</u> E-Mail: <u>chyenne.whitmore@testamericainc.com</u> Carrier Tracking No(s): COC No: <u>400-73764-29084.2</u> Page: <u>Page 2 of 2</u> Job #:	
Due Date Requested: TAT Requested (days): PO #: <u>SCS10347656</u> WO #: <u>40009375</u> Project #: <u>40009375</u> SSOW#:		Analysis Requested	
Sample Identification <u>DUP-02</u> Sample Date: <u>4-25-18</u> Sample Time: <u>1321</u> Sample Type (C=Comp, G=grab): <u>G</u> Matrix (W=water, S=solid, O=wastefoil): <u>Water</u> Preservation Code:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Total Number of containers: <u>3</u>		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <u>[Signature]</u> Date/Time: <u>4-26-18 0845</u> Company: <u>PSH EM</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>4/26/18 0845</u> Company:	
Relinquished by: <u>[Signature]</u> Date/Time:		Relinquished by: <u>[Signature]</u> Date/Time:	
Relinquished by:		Relinquished by:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: <u>0.0°C, 0.0°C, 1.0°C, TR7</u>	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-152827-2

SDG Number: Ash Pond

Login Number: 152827

List Number: 1

Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	FF Bottle received for sample APMW-1, not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-152827-2

SDG Number: Ash Pond

Login Number: 152827

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 05/01/18 04:15 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.0,17.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	06-30-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18 *
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18 *
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18
Michigan	State Program	5	9005	06-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542018-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18 *
New York	NELAP	2	11616	03-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-152827-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18 *
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-155153-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

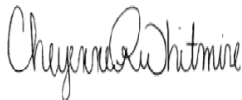
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

6/30/2018 3:35:32 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Job ID: 400-155153-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-155153-1

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-155153-1), APMW-2 (400-155153-2), APMW-3 (400-155153-3), APMW-4 (400-155153-4), APMW-5 (400-155153-5), APMW-6 (400-155153-6), APMW-8 (400-155153-8), APMW-9 (400-155153-9), APMW-10 (400-155153-10) and DUP-01 (400-155153-11). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 401749 and analytical batch 402434 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 402992 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-155153-1), APMW-2 (400-155153-2), (400-155153-A-2 MS), (400-155153-A-2 MSD), APMW-3 (400-155153-3), APMW-4 (400-155153-4), APMW-5 (400-155153-5), APMW-6 (400-155153-6), APMW-7 (400-155153-7), APMW-8 (400-155153-8), APMW-9 (400-155153-9), APMW-10 (400-155153-10), DUP-01 (400-155153-11), (400-155124-A-1), (400-155124-A-1 MS) and (400-155124-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 403017 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 402845 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-155153-1), APMW-3 (400-155153-3), APMW-4 (400-155153-4), APMW-5 (400-155153-5), APMW-6 (400-155153-6), APMW-7 (400-155153-7), APMW-8 (400-155153-8), APMW-9 (400-155153-9), APMW-10 (400-155153-10) and DUP-01 (400-155153-11). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-155153-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.78		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium	0.0028	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00084	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Calcium - DL	270		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	260		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	41		10	2.8	mg/L	2		SM 4500 SO4 E	Total/NA
Field pH	5.94				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-155153-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	3.1		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.023		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00061	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	4.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	360		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	5700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2700	F1	140	42	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	7.2		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.96				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-155153-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.081		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.073		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.068		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0019		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	5.1		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	13000		500	340	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-155153-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11000		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.37		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		250	70	mg/L	50		SM 4500 SO4 E	Total/NA
Field pH	6.5				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-155153-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.055		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0083	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00068	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	200		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7200		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4000		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.51		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	350		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.28				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-155153-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.22		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.046		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.048		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00060	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.8		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	340		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	14000		250	170	mg/L	1		SM 2540C	Total/NA
Chloride	8700		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	980		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-5 (Continued)

Lab Sample ID: 400-155153-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.29				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-155153-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.52		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00059	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.025		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00048	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	14		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	190		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.1		0.30	0.017	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4300		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.96		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	390		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.8				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-155153-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.74		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0026	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0062	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00039	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - RA	0.91		0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7000		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4100		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	81		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.25				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-155153-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.089		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.22		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.085		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.17		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00049	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	21		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	490		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	6000		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3600		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	650		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.66				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-155153-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0010	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.45		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0027	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00027	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.6		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	300		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	5800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3100		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.18				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-155153-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.11		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.30		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	79		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0011	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-10 (Continued)

Lab Sample ID: 400-155153-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.090		0.015	0.00085	mg/L	5		6020	Total
Selenium	0.00034	J	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Boron - DL	1.7		0.25	0.11	mg/L	25		6020	Recoverable Total
Total Dissolved Solids	2900		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.64		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	310		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.64				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-155153-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.091		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.22		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Recoverable Total
Lithium	0.089		0.0050	0.0011	mg/L	5		6020	Recoverable Total
Molybdenum	0.17		0.015	0.00085	mg/L	5		6020	Total
Selenium	0.00045	J	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Boron - DL	21		2.0	0.84	mg/L	200		6020	Recoverable Total
Calcium - DL	490		10	5.0	mg/L	200		6020	Total
Total Dissolved Solids	7900		130	85	mg/L	1		SM 2540C	Recoverable Total/NA
Chloride	3500		180	54	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	660		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-155153-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2.0	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 400-155153-13

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-155153-1	APMW-1	Water	06/14/18 14:57	06/15/18 12:12
400-155153-2	APMW-2	Water	06/14/18 14:11	06/15/18 12:12
400-155153-3	APMW-3	Water	06/14/18 12:25	06/15/18 12:12
400-155153-4	APMW-4	Water	06/14/18 11:18	06/15/18 12:12
400-155153-5	APMW-5	Water	06/14/18 10:01	06/15/18 12:12
400-155153-6	APMW-6	Water	06/14/18 09:10	06/15/18 12:12
400-155153-7	APMW-7	Water	06/14/18 08:15	06/15/18 12:12
400-155153-8	APMW-8	Water	06/14/18 07:05	06/15/18 12:12
400-155153-9	APMW-9	Water	06/13/18 12:03	06/15/18 12:12
400-155153-10	APMW-10	Water	06/13/18 10:48	06/15/18 12:12
400-155153-11	DUP-01	Water	06/14/18 06:05	06/15/18 12:12
400-155153-12	FB-01	Water	06/14/18 12:00	06/15/18 12:12
400-155153-13	EB-01	Water	06/14/18 15:10	06/15/18 12:12

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 06/14/18 14:57

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-1

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 22:33	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 22:33	5
Barium	0.50		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 22:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:33	5
Boron	0.78		0.050	0.021	mg/L		06/20/18 10:27	06/20/18 22:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 22:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 22:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 22:33	5
Lithium	0.0028	J	0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 22:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 22:33	5
Selenium	0.00084	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 22:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 22:33	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270		1.3	0.63	mg/L		06/20/18 10:27	06/21/18 12:49	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	260		25	17	mg/L			06/20/18 17:23	1
Chloride	1400		180	54	mg/L			06/29/18 09:24	90
Fluoride	0.090	J	0.10	0.032	mg/L			06/25/18 10:50	1
Sulfate	41		10	2.8	mg/L			06/28/18 12:13	2

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.94				SU			06/14/18 14:57	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-155153-2

Date Collected: 06/14/18 14:11

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 22:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 22:38	5
Barium	3.1		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 22:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 22:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 22:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 22:38	5
Lithium	0.023		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 22:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 22:38	5
Selenium	0.00061	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 22:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 22:38	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.0		0.25	0.11	mg/L		06/20/18 10:27	06/21/18 12:53	25
Calcium	360		1.3	0.63	mg/L		06/20/18 10:27	06/21/18 12:53	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5700		50	34	mg/L			06/20/18 17:23	1
Chloride	2700	F1	140	42	mg/L			06/29/18 12:13	70
Fluoride	0.060	J	0.10	0.032	mg/L			06/25/18 10:54	1
Sulfate	7.2		5.0	1.4	mg/L			06/28/18 11:23	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.96				SU			06/14/18 14:11	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-155153-3

Date Collected: 06/14/18 12:25

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:00	5
Arsenic	0.081		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:00	5
Barium	0.11		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:00	5
Cobalt	0.0023	J	0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:00	5
Lithium	0.073		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:00	5
Molybdenum	0.068		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:00	5
Selenium	0.0019		0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:00	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.1		0.50	0.21	mg/L		06/20/18 10:27	06/21/18 12:58	50
Calcium	310		2.5	1.3	mg/L		06/20/18 10:27	06/21/18 12:58	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	13000		500	340	mg/L			06/21/18 14:06	1
Chloride	11000		600	180	mg/L			06/29/18 09:52	300
Fluoride	0.37		0.10	0.032	mg/L			06/27/18 09:16	1
Sulfate	1200		250	70	mg/L			06/28/18 12:49	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.5				SU			06/14/18 12:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-155153-4

Date Collected: 06/14/18 11:18

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:27	5
Arsenic	0.018		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:27	5
Barium	0.50		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:27	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:27	5
Cobalt	0.0032		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:27	5
Lithium	0.055		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:27	5
Molybdenum	0.0083	J	0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:27	5
Selenium	0.00068	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:27	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		06/20/18 10:27	06/21/18 13:02	25
Calcium	200		1.3	0.63	mg/L		06/20/18 10:27	06/21/18 13:02	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7200		130	85	mg/L			06/21/18 14:06	1
Chloride	4000		180	54	mg/L			06/29/18 09:27	90
Fluoride	0.51		0.10	0.032	mg/L			06/27/18 09:19	1
Sulfate	350		100	28	mg/L			06/28/18 12:13	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.28				SU			06/14/18 11:18	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-155153-5

Date Collected: 06/14/18 10:01

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:32	5
Arsenic	0.22		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:32	5
Barium	0.11		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:32	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:32	5
Lithium	0.046		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:32	5
Molybdenum	0.048		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:32	5
Selenium	0.00060	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:32	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.8		0.50	0.21	mg/L		06/20/18 10:27	06/21/18 13:07	50
Calcium	340		2.5	1.3	mg/L		06/20/18 10:27	06/21/18 13:07	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14000		250	170	mg/L			06/21/18 14:06	1
Chloride	8700		600	180	mg/L			06/29/18 09:52	300
Fluoride	0.090	J	0.10	0.032	mg/L			06/27/18 09:21	1
Sulfate	980		250	70	mg/L			06/28/18 12:49	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.29				SU			06/14/18 10:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-155153-6

Date Collected: 06/14/18 09:10

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:36	5
Arsenic	0.52		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:36	5
Barium	0.24		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:36	5
Cadmium	0.00059	J	0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:36	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:36	5
Cobalt	0.00055	J	0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:36	5
Lithium	0.025		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:36	5
Selenium	0.00048	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:36	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14		1.0	0.42	mg/L		06/20/18 10:27	06/21/18 13:34	100
Calcium	190		5.0	2.5	mg/L		06/20/18 10:27	06/21/18 13:34	100
Molybdenum	1.1		0.30	0.017	mg/L		06/20/18 10:27	06/21/18 13:34	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4300		50	34	mg/L			06/21/18 14:06	1
Chloride	2300		180	54	mg/L			06/29/18 09:34	90
Fluoride	0.96		0.10	0.032	mg/L			06/27/18 09:23	1
Sulfate	390		100	28	mg/L			06/28/18 12:18	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.8				SU			06/14/18 09:10	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-7
Date Collected: 06/14/18 08:15
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-7
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:41	5
Arsenic	0.0015		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:41	5
Barium	0.74		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:41	5
Calcium	110		0.25	0.13	mg/L		06/20/18 10:27	06/20/18 23:41	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:41	5
Lithium	0.0026	J	0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:41	5
Molybdenum	0.0062	J	0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:41	5
Selenium	0.00039	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:41	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.91		0.050	0.021	mg/L		06/20/18 10:27	06/21/18 12:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7000		130	85	mg/L			06/21/18 14:06	1
Chloride	4100		180	54	mg/L			06/29/18 09:34	90
Fluoride	0.12		0.10	0.032	mg/L			06/27/18 09:25	1
Sulfate	81		25	7.0	mg/L			06/28/18 12:49	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.25				SU			06/14/18 08:15	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-155153-8

Date Collected: 06/14/18 07:05

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:46	5
Arsenic	0.089		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:46	5
Barium	0.22		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:46	5
Chromium	0.0032		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:46	5
Lithium	0.085		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:46	5
Molybdenum	0.17		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:46	5
Selenium	0.00049	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	21		2.0	0.84	mg/L		06/20/18 10:27	06/21/18 13:38	200
Calcium	490		10	5.0	mg/L		06/20/18 10:27	06/21/18 13:38	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6000		130	85	mg/L			06/21/18 14:06	1
Chloride	3600		180	54	mg/L			06/29/18 09:34	90
Fluoride	1.0		0.10	0.032	mg/L			06/27/18 09:40	1
Sulfate	650		100	28	mg/L			06/28/18 12:18	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.66				SU			06/14/18 07:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-155153-9

Date Collected: 06/13/18 12:03

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:50	5
Arsenic	0.0010	J	0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:50	5
Barium	0.45		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:50	5
Lithium	0.0027	J	0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:50	5
Selenium	0.00027	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:50	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.6		1.0	0.42	mg/L		06/20/18 10:27	06/21/18 13:43	100
Calcium	300		5.0	2.5	mg/L		06/20/18 10:27	06/21/18 13:43	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5800		50	34	mg/L			06/20/18 17:23	1
Chloride	3100		180	54	mg/L			06/29/18 09:23	90
Fluoride	0.060	J	0.10	0.032	mg/L			06/25/18 10:42	1
Sulfate	300		100	28	mg/L			06/28/18 10:05	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.18				SU			06/13/18 12:03	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-155153-10

Date Collected: 06/13/18 10:48

Matrix: Water

Date Received: 06/15/18 12:12

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:55	5
Arsenic	0.11		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:55	5
Barium	0.30		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:55	5
Calcium	79		0.25	0.13	mg/L		06/20/18 10:27	06/20/18 23:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:55	5
Lithium	0.013		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:55	5
Molybdenum	0.090		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:55	5
Selenium	0.00034	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:55	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.25	0.11	mg/L		06/20/18 10:27	06/21/18 13:47	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2900		25	17	mg/L			06/20/18 17:23	1
Chloride	1400		180	54	mg/L			06/29/18 09:23	90
Fluoride	0.64		0.10	0.032	mg/L			06/25/18 10:46	1
Sulfate	310		100	28	mg/L			06/28/18 10:05	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.64				SU			06/13/18 10:48	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 06/14/18 06:05
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 23:59	5
Arsenic	0.091		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 23:59	5
Barium	0.22		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 23:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 23:59	5
Chromium	0.0033		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 23:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 23:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 23:59	5
Lithium	0.089		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 23:59	5
Molybdenum	0.17		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 23:59	5
Selenium	0.00045	J	0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 23:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 23:59	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	21		2.0	0.84	mg/L		06/20/18 10:27	06/21/18 12:25	200
Calcium	490		10	5.0	mg/L		06/20/18 10:27	06/21/18 12:25	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7900		130	85	mg/L			06/21/18 14:06	1
Chloride	3500		180	54	mg/L			06/29/18 09:34	90
Fluoride	1.0		0.10	0.032	mg/L			06/27/18 09:28	1
Sulfate	660		100	28	mg/L			06/28/18 12:18	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 06/14/18 12:00
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/21/18 00:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/20/18 10:27	06/21/18 00:04	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/20/18 10:27	06/21/18 00:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/21/18 00:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/21/18 00:04	5
Calcium	<0.13		0.25	0.13	mg/L		06/20/18 10:27	06/21/18 00:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/21/18 00:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/21/18 00:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/21/18 00:04	5
Lithium	<0.0011		0.0050	0.0011	mg/L		06/20/18 10:27	06/21/18 00:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/21/18 00:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/20/18 10:27	06/21/18 00:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/21/18 00:04	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		06/20/18 10:27	06/21/18 12:30	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			06/21/18 14:06	1
Chloride	<0.60		2.0	0.60	mg/L			06/29/18 08:37	1
Fluoride	<0.032		0.10	0.032	mg/L			06/27/18 09:32	1
Sulfate	2.0	J	5.0	1.4	mg/L			06/28/18 11:27	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: EB-01
Date Collected: 06/14/18 15:10
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-13
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/21/18 00:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/20/18 10:27	06/21/18 00:08	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/20/18 10:27	06/21/18 00:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/21/18 00:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/21/18 00:08	5
Calcium	<0.13		0.25	0.13	mg/L		06/20/18 10:27	06/21/18 00:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/21/18 00:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/21/18 00:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/21/18 00:08	5
Lithium	<0.0011		0.0050	0.0011	mg/L		06/20/18 10:27	06/21/18 00:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/21/18 00:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/20/18 10:27	06/21/18 00:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/21/18 00:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		06/20/18 10:27	06/21/18 12:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			06/21/18 14:06	1
Chloride	<0.60		2.0	0.60	mg/L			06/29/18 08:37	1
Fluoride	<0.032		0.10	0.032	mg/L			06/27/18 09:47	1
Sulfate	<1.4		5.0	1.4	mg/L			06/28/18 11:27	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 06/14/18 14:57

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 22:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402069	06/21/18 12:49	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401798	06/20/18 17:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	402992	06/29/18 09:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402401	06/25/18 10:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		2	402871	06/28/18 12:13	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 14:57	CDH	TAL PEN

Client Sample ID: APMW-2

Date Collected: 06/14/18 14:11

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 22:38	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402069	06/21/18 12:53	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401798	06/20/18 17:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	403017	06/29/18 12:13	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402401	06/25/18 10:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402871	06/28/18 11:23	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 14:11	CDH	TAL PEN

Client Sample ID: APMW-3

Date Collected: 06/14/18 12:25

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	402069	06/21/18 12:58	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	402992	06/29/18 09:52	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-155153-3

Date Collected: 06/14/18 12:25

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	402871	06/28/18 12:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 12:25	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-155153-4

Date Collected: 06/14/18 11:18

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:27	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402069	06/21/18 13:02	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	402992	06/29/18 09:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402871	06/28/18 12:13	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 11:18	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-155153-5

Date Collected: 06/14/18 10:01

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:32	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	402069	06/21/18 13:07	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		300	402992	06/29/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:21	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	402871	06/28/18 12:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 10:01	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-6

Date Collected: 06/14/18 09:10

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402069	06/21/18 13:34	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	402992	06/29/18 09:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:23	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402871	06/28/18 12:18	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 09:10	CDH	TAL PEN

Client Sample ID: APMW-7

Date Collected: 06/14/18 08:15

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:41	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	402069	06/21/18 12:40	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 09:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	402992	06/29/18 09:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:25	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	402871	06/28/18 12:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 08:15	CDH	TAL PEN

Client Sample ID: APMW-8

Date Collected: 06/14/18 07:05

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402069	06/21/18 13:38	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	402992	06/29/18 09:34	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-155153-8

Date Collected: 06/14/18 07:05

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:40	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402871	06/28/18 12:18	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/14/18 07:05	CDH	TAL PEN

Client Sample ID: APMW-9

Lab Sample ID: 400-155153-9

Date Collected: 06/13/18 12:03

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	402069	06/21/18 13:43	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401798	06/20/18 17:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	402992	06/29/18 09:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402401	06/25/18 10:42	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402845	06/28/18 10:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/13/18 12:03	CDH	TAL PEN

Client Sample ID: APMW-10

Lab Sample ID: 400-155153-10

Date Collected: 06/13/18 10:48

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:55	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	402069	06/21/18 13:47	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401798	06/20/18 17:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	402992	06/29/18 09:23	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402401	06/25/18 10:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402845	06/28/18 10:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	402908	06/13/18 10:48	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Client Sample ID: DUP-01

Date Collected: 06/14/18 06:05

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/20/18 23:59	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	402069	06/21/18 12:25	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	402992	06/29/18 09:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:28	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	402871	06/28/18 12:18	RRC	TAL PEN

Client Sample ID: FB-01

Date Collected: 06/14/18 12:00

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/21/18 00:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	402069	06/21/18 12:30	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	402992	06/29/18 08:37	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:32	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402871	06/28/18 11:27	RRC	TAL PEN

Client Sample ID: EB-01

Date Collected: 06/14/18 15:10

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	401891	06/21/18 00:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		401762	06/20/18 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	402069	06/21/18 12:35	DRE	TAL PEN
Total/NA	Prep	7470A			401749	06/23/18 14:33	DN1	TAL PEN
Total/NA	Analysis	7470A		1	402434	06/25/18 10:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	401953	06/21/18 14:06	RRC	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	402992	06/29/18 08:37	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	402702	06/27/18 09:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	402871	06/28/18 11:27	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Metals

Prep Batch: 401749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	7470A	
400-155153-2	APMW-2	Total/NA	Water	7470A	
400-155153-3	APMW-3	Total/NA	Water	7470A	
400-155153-4	APMW-4	Total/NA	Water	7470A	
400-155153-5	APMW-5	Total/NA	Water	7470A	
400-155153-6	APMW-6	Total/NA	Water	7470A	
400-155153-7	APMW-7	Total/NA	Water	7470A	
400-155153-8	APMW-8	Total/NA	Water	7470A	
400-155153-9	APMW-9	Total/NA	Water	7470A	
400-155153-10	APMW-10	Total/NA	Water	7470A	
400-155153-11	DUP-01	Total/NA	Water	7470A	
400-155153-12	FB-01	Total/NA	Water	7470A	
400-155153-13	EB-01	Total/NA	Water	7470A	
MB 400-401749/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-401749/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-155153-1 MS	APMW-1	Total/NA	Water	7470A	
400-155153-1 MSD	APMW-1	Total/NA	Water	7470A	

Prep Batch: 401762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-155153-1	APMW-1	Total Recoverable	Water	3005A	
400-155153-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-155153-2	APMW-2	Total Recoverable	Water	3005A	
400-155153-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-155153-3	APMW-3	Total Recoverable	Water	3005A	
400-155153-4	APMW-4	Total Recoverable	Water	3005A	
400-155153-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-155153-5	APMW-5	Total Recoverable	Water	3005A	
400-155153-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-155153-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-155153-6	APMW-6	Total Recoverable	Water	3005A	
400-155153-7	APMW-7	Total Recoverable	Water	3005A	
400-155153-7 - RA	APMW-7	Total Recoverable	Water	3005A	
400-155153-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-155153-8	APMW-8	Total Recoverable	Water	3005A	
400-155153-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-155153-9	APMW-9	Total Recoverable	Water	3005A	
400-155153-10	APMW-10	Total Recoverable	Water	3005A	
400-155153-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-155153-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-155153-11	DUP-01	Total Recoverable	Water	3005A	
400-155153-12 - RA	FB-01	Total Recoverable	Water	3005A	
400-155153-12	FB-01	Total Recoverable	Water	3005A	
400-155153-13 - RA	EB-01	Total Recoverable	Water	3005A	
400-155153-13	EB-01	Total Recoverable	Water	3005A	
MB 400-401762/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-401762/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-155153-2 MS	APMW-2	Total Recoverable	Water	3005A	
400-155153-2 MSD	APMW-2	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 401891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total Recoverable	Water	6020	401762
400-155153-2	APMW-2	Total Recoverable	Water	6020	401762
400-155153-3	APMW-3	Total Recoverable	Water	6020	401762
400-155153-4	APMW-4	Total Recoverable	Water	6020	401762
400-155153-5	APMW-5	Total Recoverable	Water	6020	401762
400-155153-6	APMW-6	Total Recoverable	Water	6020	401762
400-155153-7	APMW-7	Total Recoverable	Water	6020	401762
400-155153-8	APMW-8	Total Recoverable	Water	6020	401762
400-155153-9	APMW-9	Total Recoverable	Water	6020	401762
400-155153-10	APMW-10	Total Recoverable	Water	6020	401762
400-155153-11	DUP-01	Total Recoverable	Water	6020	401762
400-155153-12	FB-01	Total Recoverable	Water	6020	401762
400-155153-13	EB-01	Total Recoverable	Water	6020	401762
MB 400-401762/1-A ^5	Method Blank	Total Recoverable	Water	6020	401762
LCS 400-401762/2-A	Lab Control Sample	Total Recoverable	Water	6020	401762
400-155153-2 MS	APMW-2	Total Recoverable	Water	6020	401762
400-155153-2 MSD	APMW-2	Total Recoverable	Water	6020	401762

Analysis Batch: 402069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1 - DL	APMW-1	Total Recoverable	Water	6020	401762
400-155153-2 - DL	APMW-2	Total Recoverable	Water	6020	401762
400-155153-3 - DL	APMW-3	Total Recoverable	Water	6020	401762
400-155153-4 - DL	APMW-4	Total Recoverable	Water	6020	401762
400-155153-5 - DL	APMW-5	Total Recoverable	Water	6020	401762
400-155153-6 - DL	APMW-6	Total Recoverable	Water	6020	401762
400-155153-7 - RA	APMW-7	Total Recoverable	Water	6020	401762
400-155153-8 - DL	APMW-8	Total Recoverable	Water	6020	401762
400-155153-9 - DL	APMW-9	Total Recoverable	Water	6020	401762
400-155153-10 - DL	APMW-10	Total Recoverable	Water	6020	401762
400-155153-11 - DL	DUP-01	Total Recoverable	Water	6020	401762
400-155153-12 - RA	FB-01	Total Recoverable	Water	6020	401762
400-155153-13 - RA	EB-01	Total Recoverable	Water	6020	401762

Analysis Batch: 402434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	7470A	401749
400-155153-2	APMW-2	Total/NA	Water	7470A	401749
400-155153-3	APMW-3	Total/NA	Water	7470A	401749
400-155153-4	APMW-4	Total/NA	Water	7470A	401749
400-155153-5	APMW-5	Total/NA	Water	7470A	401749
400-155153-6	APMW-6	Total/NA	Water	7470A	401749
400-155153-7	APMW-7	Total/NA	Water	7470A	401749
400-155153-8	APMW-8	Total/NA	Water	7470A	401749
400-155153-9	APMW-9	Total/NA	Water	7470A	401749
400-155153-10	APMW-10	Total/NA	Water	7470A	401749
400-155153-11	DUP-01	Total/NA	Water	7470A	401749
400-155153-12	FB-01	Total/NA	Water	7470A	401749
400-155153-13	EB-01	Total/NA	Water	7470A	401749
MB 400-401749/14-A	Method Blank	Total/NA	Water	7470A	401749
LCS 400-401749/15-A	Lab Control Sample	Total/NA	Water	7470A	401749

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 402434 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1 MS	APMW-1	Total/NA	Water	7470A	401749
400-155153-1 MSD	APMW-1	Total/NA	Water	7470A	401749

General Chemistry

Analysis Batch: 401798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	SM 2540C	
400-155153-2	APMW-2	Total/NA	Water	SM 2540C	
400-155153-9	APMW-9	Total/NA	Water	SM 2540C	
400-155153-10	APMW-10	Total/NA	Water	SM 2540C	
MB 400-401798/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-401798/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-155121-A-10 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 401953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-3	APMW-3	Total/NA	Water	SM 2540C	
400-155153-4	APMW-4	Total/NA	Water	SM 2540C	
400-155153-5	APMW-5	Total/NA	Water	SM 2540C	
400-155153-6	APMW-6	Total/NA	Water	SM 2540C	
400-155153-7	APMW-7	Total/NA	Water	SM 2540C	
400-155153-8	APMW-8	Total/NA	Water	SM 2540C	
400-155153-11	DUP-01	Total/NA	Water	SM 2540C	
400-155153-12	FB-01	Total/NA	Water	SM 2540C	
400-155153-13	EB-01	Total/NA	Water	SM 2540C	
MB 400-401953/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-401953/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-155198-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	
400-155198-A-7 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 402401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-155153-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-155153-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-155153-10	APMW-10	Total/NA	Water	SM 4500 F C	
MB 400-402401/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-402401/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-155116-A-6 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-155116-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-155116-A-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 402702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-155153-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-155153-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-155153-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-155153-7	APMW-7	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 402702 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-155153-11	DUP-01	Total/NA	Water	SM 4500 F C	
400-155153-12	FB-01	Total/NA	Water	SM 4500 F C	
400-155153-13	EB-01	Total/NA	Water	SM 4500 F C	
MB 400-402702/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-402702/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
660-87922-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
660-87922-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-155153-8 DU	APMW-8	Total/NA	Water	SM 4500 F C	

Analysis Batch: 402845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-155153-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-402845/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-402845/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-402845/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-155138-E-6 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-155138-E-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 402871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-155153-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-155153-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-155153-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-155153-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-155153-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-155153-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-155153-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-155153-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-155153-12	FB-01	Total/NA	Water	SM 4500 SO4 E	
400-155153-13	EB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-402871/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-402871/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-402871/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-155138-E-7 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-155138-E-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-155154-A-2 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-155154-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 402992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-155153-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-155153-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-155153-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
400-155153-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-155153-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-155153-8	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-155153-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 402992 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-155153-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-155153-12	FB-01	Total/NA	Water	SM 4500 Cl- E	
400-155153-13	EB-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-402992/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-402992/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-402992/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-155124-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-155124-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-155154-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-155154-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 403017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-403017/56	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-403017/57	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-403017/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-155153-2 MS	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-155153-2 MSD	APMW-2	Total/NA	Water	SM 4500 Cl- E	

Field Service / Mobile Lab

Analysis Batch: 402908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	Field Sampling	
400-155153-2	APMW-2	Total/NA	Water	Field Sampling	
400-155153-3	APMW-3	Total/NA	Water	Field Sampling	
400-155153-4	APMW-4	Total/NA	Water	Field Sampling	
400-155153-5	APMW-5	Total/NA	Water	Field Sampling	
400-155153-6	APMW-6	Total/NA	Water	Field Sampling	
400-155153-7	APMW-7	Total/NA	Water	Field Sampling	
400-155153-8	APMW-8	Total/NA	Water	Field Sampling	
400-155153-9	APMW-9	Total/NA	Water	Field Sampling	
400-155153-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-401762/1-A ^5
Matrix: Water
Analysis Batch: 401891

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 401762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/20/18 10:27	06/20/18 22:20	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/20/18 10:27	06/20/18 22:20	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/20/18 10:27	06/20/18 22:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:20	5
Boron	<0.021		0.050	0.021	mg/L		06/20/18 10:27	06/20/18 22:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/20/18 10:27	06/20/18 22:20	5
Calcium	<0.13		0.25	0.13	mg/L		06/20/18 10:27	06/20/18 22:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/20/18 10:27	06/20/18 22:20	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/20/18 10:27	06/20/18 22:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/20/18 10:27	06/20/18 22:20	5
Lithium	<0.0011		0.0050	0.0011	mg/L		06/20/18 10:27	06/20/18 22:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/20/18 10:27	06/20/18 22:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/20/18 10:27	06/20/18 22:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/20/18 10:27	06/20/18 22:20	5

Lab Sample ID: LCS 400-401762/2-A
Matrix: Water
Analysis Batch: 401891

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 401762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0526		mg/L		105	80 - 120
Arsenic	0.0500	0.0505		mg/L		101	80 - 120
Barium	0.0500	0.0506		mg/L		101	80 - 120
Beryllium	0.0500	0.0496		mg/L		99	80 - 120
Boron	0.100	0.0998		mg/L		100	80 - 120
Cadmium	0.0500	0.0510		mg/L		102	80 - 120
Calcium	5.00	4.86		mg/L		97	80 - 120
Chromium	0.0500	0.0490		mg/L		98	80 - 120
Cobalt	0.0500	0.0533		mg/L		107	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Lithium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.0500	0.0470		mg/L		94	80 - 120
Selenium	0.0500	0.0533		mg/L		107	80 - 120
Thallium	0.0100	0.00995		mg/L		99	80 - 120

Lab Sample ID: 400-155153-2 MS
Matrix: Water
Analysis Batch: 401891

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 401762

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0539		mg/L		108	75 - 125
Arsenic	<0.00046		0.0500	0.0513		mg/L		103	75 - 125
Barium	3.1		0.0500	3.13	4	mg/L		-13	75 - 125
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125
Boron	4.4	E	0.100	4.40	E 4	mg/L		-10	75 - 125
Cadmium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125
Calcium	360	E	5.00	355	E 4	mg/L		-125	75 - 125
Chromium	<0.0011		0.0500	0.0486		mg/L		97	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-155153-2 MS
Matrix: Water
Analysis Batch: 401891

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 401762

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	<0.00040		0.0500	0.0488		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0431		mg/L		86	75 - 125
Lithium	0.023		0.0500	0.0666		mg/L		88	75 - 125
Molybdenum	<0.00085		0.0500	0.0490		mg/L		98	75 - 125
Selenium	0.00061	J	0.0500	0.0553		mg/L		109	75 - 125
Thallium	<0.00085		0.0100	0.00991		mg/L		99	75 - 125

Lab Sample ID: 400-155153-2 MSD
Matrix: Water
Analysis Batch: 401891

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 401762

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0556		mg/L		111	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0534		mg/L		107	75 - 125	4	20
Barium	3.1		0.0500	3.27	4	mg/L		266	75 - 125	4	20
Beryllium	<0.00034		0.0500	0.0509		mg/L		102	75 - 125	4	20
Boron	4.4	E	0.100	4.63	E 4	mg/L		225	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0520		mg/L		104	75 - 125	5	20
Calcium	360	E	5.00	366	E 4	mg/L		111	75 - 125	3	20
Chromium	<0.0011		0.0500	0.0501		mg/L		100	75 - 125	3	20
Cobalt	<0.00040		0.0500	0.0507		mg/L		101	75 - 125	4	20
Lead	<0.00035		0.0500	0.0441		mg/L		88	75 - 125	2	20
Lithium	0.023		0.0500	0.0695		mg/L		94	75 - 125	4	20
Molybdenum	<0.00085		0.0500	0.0497		mg/L		99	75 - 125	2	20
Selenium	0.00061	J	0.0500	0.0562		mg/L		111	75 - 125	2	20
Thallium	<0.00085		0.0100	0.0104		mg/L		104	75 - 125	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-401749/14-A
Matrix: Water
Analysis Batch: 402434

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 401749

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/23/18 14:33	06/25/18 09:22	1

Lab Sample ID: LCS 400-401749/15-A
Matrix: Water
Analysis Batch: 402434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 401749

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000964		mg/L		96	80 - 120

Lab Sample ID: 400-155153-1 MS
Matrix: Water
Analysis Batch: 402434

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 401749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070	F1	0.00201	0.00144	F1	mg/L		72	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Lab Sample ID: 400-155153-1 MSD
Matrix: Water
Analysis Batch: 402434

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 401749

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070	F1	0.00201	0.00131	F1	mg/L		65	80 - 120	10	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-401798/1
Matrix: Water
Analysis Batch: 401798

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			06/20/18 17:23	1

Lab Sample ID: LCS 400-401798/2
Matrix: Water
Analysis Batch: 401798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	246		mg/L		84	78 - 122

Lab Sample ID: 400-155121-A-10 DU
Matrix: Water
Analysis Batch: 401798

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	600		584		mg/L		2	5

Lab Sample ID: MB 400-401953/1
Matrix: Water
Analysis Batch: 401953

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			06/21/18 14:06	1

Lab Sample ID: LCS 400-401953/2
Matrix: Water
Analysis Batch: 401953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	252		mg/L		86	78 - 122

Lab Sample ID: 400-155198-A-4 DU
Matrix: Water
Analysis Batch: 401953

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	92		92.0		mg/L		0	5

Lab Sample ID: 400-155198-A-7 DU
Matrix: Water
Analysis Batch: 401953

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	14		14.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-402992/6
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/29/18 08:27	1

Lab Sample ID: LCS 400-402992/7
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.5		mg/L		105	90 - 110

Lab Sample ID: MRL 400-402992/3
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.80	J	mg/L		90	50 - 150

Lab Sample ID: 400-155124-A-1 MS
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	170	F1	100	172	F1	mg/L		0.9	73 - 120

Lab Sample ID: 400-155124-A-1 MSD
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	170	F1	100	174	F1	mg/L		2	73 - 120	1	8

Lab Sample ID: 400-155154-A-1 MS
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	17		10.0	27.1		mg/L		97	73 - 120

Lab Sample ID: 400-155154-A-1 MSD
Matrix: Water
Analysis Batch: 402992

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17		10.0	27.1		mg/L		97	73 - 120	0	8

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MB 400-403017/56
Matrix: Water
Analysis Batch: 403017

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			06/29/18 11:00	1

Lab Sample ID: LCS 400-403017/57
Matrix: Water
Analysis Batch: 403017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.0		mg/L		103	90 - 110

Lab Sample ID: MRL 400-403017/53
Matrix: Water
Analysis Batch: 403017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.72	J	mg/L		86	50 - 150

Lab Sample ID: 400-155153-2 MS
Matrix: Water
Analysis Batch: 403017

Client Sample ID: APMW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2700	F1	700	2590	F1	mg/L		-15	73 - 120

Lab Sample ID: 400-155153-2 MSD
Matrix: Water
Analysis Batch: 403017

Client Sample ID: APMW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	2700	F1	700	2600	F1	mg/L		-14	73 - 120	0	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-402401/3
Matrix: Water
Analysis Batch: 402401

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			06/25/18 09:11	1

Lab Sample ID: LCS 400-402401/4
Matrix: Water
Analysis Batch: 402401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.87		mg/L		97	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-155116-A-6 MS
Matrix: Water
Analysis Batch: 402401

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	0.980		mg/L		98	75 - 125

Lab Sample ID: 400-155116-A-6 MSD
Matrix: Water
Analysis Batch: 402401

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125	4	4

Lab Sample ID: 400-155116-A-5 DU
Matrix: Water
Analysis Batch: 402401

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.040	J	0.0400	J	mg/L		0	4

Lab Sample ID: MB 400-402702/3
Matrix: Water
Analysis Batch: 402702

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			06/27/18 08:55	1

Lab Sample ID: LCS 400-402702/4
Matrix: Water
Analysis Batch: 402702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.87		mg/L		97	90 - 110

Lab Sample ID: 660-87922-B-1 MS
Matrix: Water
Analysis Batch: 402702

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125

Lab Sample ID: 660-87922-B-1 MSD
Matrix: Water
Analysis Batch: 402702

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.02		mg/L		102	75 - 125	0	4

Lab Sample ID: 400-155153-8 DU
Matrix: Water
Analysis Batch: 402702

Client Sample ID: APMW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	1.0		0.980		mg/L		2	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-402845/6
Matrix: Water
Analysis Batch: 402845

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/28/18 09:26	1

Lab Sample ID: LCS 400-402845/7
Matrix: Water
Analysis Batch: 402845

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.1		mg/L		101	90 - 110

Lab Sample ID: MRL 400-402845/3
Matrix: Water
Analysis Batch: 402845

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.56		mg/L		111	50 - 150

Lab Sample ID: 400-155138-E-6 MS
Matrix: Water
Analysis Batch: 402845

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F2	10.0	9.47		mg/L		95	77 - 128

Lab Sample ID: 400-155138-E-6 MSD
Matrix: Water
Analysis Batch: 402845

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F2	10.0	8.38	F2	mg/L		84	77 - 128	12	5

Lab Sample ID: MB 400-402871/6
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			06/28/18 11:16	1

Lab Sample ID: LCS 400-402871/7
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.1		mg/L		101	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-402871/3
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.69		mg/L		114	50 - 150

Lab Sample ID: 400-155138-E-7 MS
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	3.9	J	10.0	15.0		mg/L		112	77 - 128

Lab Sample ID: 400-155138-E-7 MSD
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3.9	J	10.0	14.9		mg/L		111	77 - 128	1	5

Lab Sample ID: 400-155154-A-2 MS
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2.3	J	10.0	12.5		mg/L		101	77 - 128

Lab Sample ID: 400-155154-A-2 MSD
Matrix: Water
Analysis Batch: 402871

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2.3	J	10.0	12.4		mg/L		101	77 - 128	0	5

Chain of Custody Record

Client Information Client Contact: <u>Beck Scales</u> Mr. Cale Sellers Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-73764-29084.1 Page: Page 1 of 2 Job #: 155153						
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SM4500_Cl_E - Chloride, SM4500_SO4_F - Sulfate, 4500_F_C - Fluoride, 2540C - TDS 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, Tl, 7470A - Hg						
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Total Number of Containers		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Z - other (specify)						
Sample Identification		Special Instructions/Note:						
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Carrier Tracking No(s)
APMW-1	6/14/18	1457	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-2	6/14/18	1411		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-3	6/14/18	1225		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-4	6/14/18	1118		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-5	6/14/18	1001		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-6	6/14/18	0910		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-7	6/14/18	0815		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-8	6/14/18	0705		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-9	6/13/18	1203		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
APMW-10	6/13/18	1048		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
DUE - 01 Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Method of Shipment:						
Relinquished by:		Date/Time: 6/15/18 1212 Company: RDX						
Relinquished by:		Date/Time: 6/15/18 1222 Company: RDX						
Relinquished by:		Date/Time:						
Relinquished by:		Date/Time:						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature and other Remarks: 2.5°C 3.1°C 4.2°C 2.6°C 1.8°C						



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):										
Client Contact: Mr. Cale Sellers		Phone: 380 3454	COC No: 400-73764-29084.2										
Company: Southern Company		E-Mail: cheyenne.whitmire@testamericainc.com	Page: Page 2 of 2										
Address: PO BOX 2641 GSC8		City: Birmingham	Job #: 155153										
State, Zip: AL, 35291		PO #: SCS10347656	Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2OAS E - NaHSO4 Q - NaZSO3 F - MeOH R - NaZSO3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDTA Z - other (specify) Other:										
Project Name: CCR -Plant Watson		Project #: 40009375											
Site: Ash Pond		SSOW#:											
Due Date Requested:		TAT Requested (days):											
Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)													
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Matrix	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 -Sb,As,Ba,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,7470A -Hg	SM4500 Cl ⁻ Chloride, SM4500 SO ₄ ²⁻ Sulfate, 9315 Ra226, 9320 Ra228, Ra226Ra228 GFPC	4500 F, C - Fluoride, 2540C - TDS	6200 -Sb,As,Ba,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,7470A -Hg	Total Number of Containers	Special Instructions/Note:
FB-01	6/14/18	1200	G		Water	X	X						
ES-01	6/14/18	1510	G		Water	X	X						
					Water								
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)													
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Special Instructions/QC Requirements:													
Empty Kit Relinquished by: [Signature] Date: 6/15/18 Time: 1212 Company: [Signature]													
Relinquished by: [Signature] Date/Time: 6/15/18 1212 Company: [Signature]													
Relinquished by: [Signature] Date/Time: _____ Company: _____													
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Δ <input type="checkbox"/> No <input type="checkbox"/> Δ <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:													



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-155153-1

SDG Number: Ash Pond

Login Number: 155153

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5°C,3.1°C,4.2°C,2.6°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-1
 SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18 *
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-18 *
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-18 *
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-155153-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

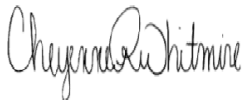
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

7/23/2018 5:49:50 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Job ID: 400-155153-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-155153-2

RAD

Method(s) 9315: Radium-226 Prep Batch 160-372551: The following samples have a barium carrier recovery above the 110% QC limit; (240-96977-1: 118%, 400-155153-2: 111%). A native barium correction was applied, however, there are likely other salt-like compounds that can interfere with the barium sulfate recovery (i.e. calcium, magnesium, TDS, etc). The LCS (laboratory control sample/laboratory) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been reported with this narrative. APMW-2 (400-155153-2) and (240-96977-BF-1-A)

Method(s) 9320: Radium-228 Prep Batch 160-372643: The following samples have a barium carrier recovery above the 110% QC limit; (240-96977-1: 118%, 400-155153-2: 111%). A native barium correction was applied, however, there are likely other salt-like compounds that can interfere with the barium sulfate recovery (i.e. calcium, magnesium, TDS, etc). The LCS (laboratory control sample/laboratory) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been reported with this narrative. APMW-2 (400-155153-2) and (240-96977-BF-1-B)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-372643: Sample aliquots reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-1 (400-155153-1), APMW-7 (400-155153-7), APMW-8 (400-155153-8) and DUP-01 (400-155153-11)

Method(s) PrecSep_0: Radium-228 Prep Batch 160-372643: The barium carrier recovery is outside the upper control limit (110%) for the following sample: APMW-2 (400-155153-2). The pellet was noted as larger during the out of ingrowth process.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-372551: Sample aliquots reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-1 (400-155153-1), APMW-7 (400-155153-7), APMW-8 (400-155153-8) and DUP-01 (400-155153-11)

Method(s) PrecSep-21: Radium-226 Prep Batch 160-372551: The barium carrier recovery is outside the upper control limit (110%) for the following sample: APMW-2 (400-155153-2). The pellets were noted as larger during the out of ingrowth process.

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-155153-1	APMW-1	Water	06/14/18 14:57	06/15/18 12:12
400-155153-2	APMW-2	Water	06/14/18 14:11	06/15/18 12:12
400-155153-3	APMW-3	Water	06/14/18 12:25	06/15/18 12:12
400-155153-4	APMW-4	Water	06/14/18 11:18	06/15/18 12:12
400-155153-5	APMW-5	Water	06/14/18 10:01	06/15/18 12:12
400-155153-6	APMW-6	Water	06/14/18 09:10	06/15/18 12:12
400-155153-7	APMW-7	Water	06/14/18 08:15	06/15/18 12:12
400-155153-8	APMW-8	Water	06/14/18 07:05	06/15/18 12:12
400-155153-9	APMW-9	Water	06/13/18 12:03	06/15/18 12:12
400-155153-10	APMW-10	Water	06/13/18 10:48	06/15/18 12:12
400-155153-11	DUP-01	Water	06/14/18 06:05	06/15/18 12:12
400-155153-12	FB-01	Water	06/14/18 12:00	06/15/18 12:12
400-155153-13	EB-01	Water	06/14/18 15:10	06/15/18 12:12

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-155153-1

Date Collected: 06/14/18 14:57

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.05		0.449	0.485	1.00	0.284	pCi/L	06/26/18 10:49	07/19/18 07:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 10:49	07/19/18 07:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.62		0.400	0.427	1.00	0.482	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	85.6		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.67		0.601	0.646	5.00	0.482	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-155153-2

Date Collected: 06/14/18 14:11

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	13.5		0.999	1.57	1.00	0.232	pCi/L	06/26/18 10:49	07/19/18 07:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	111	X	40 - 110					06/26/18 10:49	07/19/18 07:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	7.40		0.585	0.898	1.00	0.389	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	111	X	40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	89.3		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	20.9		1.16	1.81	5.00	0.389	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-155153-3

Date Collected: 06/14/18 12:25

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.613		0.224	0.231	1.00	0.197	pCi/L	06/26/18 10:49	07/19/18 07:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					06/26/18 10:49	07/19/18 07:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.76		0.516	0.740	1.00	0.385	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	88.2		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.37		0.563	0.775	5.00	0.385	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-155153-4

Date Collected: 06/14/18 11:18

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.834		0.246	0.257	1.00	0.192	pCi/L	06/26/18 10:49	07/19/18 07:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 10:49	07/19/18 07:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.66		0.315	0.350	1.00	0.336	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	89.0		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.50		0.400	0.434	5.00	0.336	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-155153-5

Date Collected: 06/14/18 10:01

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.673		0.223	0.231	1.00	0.157	pCi/L	06/26/18 10:49	07/19/18 07:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 10:49	07/19/18 07:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.51		0.454	0.557	1.00	0.453	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	87.5		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.18		0.506	0.603	5.00	0.453	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-155153-6

Date Collected: 06/14/18 09:10

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.12		0.280	0.298	1.00	0.217	pCi/L	06/26/18 10:49	07/19/18 07:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 10:49	07/19/18 07:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.69		0.331	0.366	1.00	0.378	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	89.3		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.81		0.434	0.472	5.00	0.378	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-155153-7

Date Collected: 06/14/18 08:15

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.28		0.460	0.504	1.00	0.259	pCi/L	06/26/18 10:49	07/19/18 07:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/26/18 10:49	07/19/18 07:49	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.66		0.540	0.636	1.00	0.563	pCi/L	06/26/18 12:03	07/18/18 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/26/18 12:03	07/18/18 17:31	1
Y Carrier	89.0		40 - 110					06/26/18 12:03	07/18/18 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.94		0.709	0.811	5.00	0.563	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-155153-8

Date Collected: 06/14/18 07:05

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.978		0.315	0.327	1.00	0.257	pCi/L	06/26/18 10:49	07/19/18 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					06/26/18 10:49	07/19/18 07:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.44		0.438	0.492	1.00	0.475	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	92.0		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.41		0.540	0.591	5.00	0.475	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-155153-9

Date Collected: 06/13/18 12:03

Matrix: Water

Date Received: 06/15/18 12:12

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.38		0.380	0.436	1.00	0.154	pCi/L	06/26/18 10:49	07/19/18 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 10:49	07/19/18 16:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.05		0.444	0.580	1.00	0.364	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	88.6		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.43		0.584	0.726	5.00	0.364	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-10

Date Collected: 06/13/18 10:48

Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-10

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.11		0.282	0.299	1.00	0.175	pCi/L	06/26/18 10:49	07/19/18 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/26/18 10:49	07/19/18 07:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.80		0.324	0.364	1.00	0.335	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	90.1		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.91		0.430	0.471	5.00	0.335	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 06/14/18 06:05
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.01		0.309	0.322	1.00	0.215	pCi/L	06/26/18 10:49	07/19/18 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					06/26/18 10:49	07/19/18 07:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.62		0.450	0.510	1.00	0.458	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	85.2		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.64		0.546	0.603	5.00	0.458	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 06/14/18 12:00
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-12
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0607	U	0.117	0.117	1.00	0.212	pCi/L	06/26/18 10:49	07/19/18 07:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/26/18 10:49	07/19/18 07:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.236	U	0.199	0.200	1.00	0.317	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	88.6		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.296	U	0.231	0.232	5.00	0.317	pCi/L		07/23/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: EB-01
Date Collected: 06/14/18 15:10
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-13
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0109	U	0.107	0.107	1.00	0.224	pCi/L	06/26/18 10:49	07/19/18 07:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/26/18 10:49	07/19/18 07:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0613	U	0.181	0.181	1.00	0.315	pCi/L	06/26/18 12:03	07/18/18 17:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					06/26/18 12:03	07/18/18 17:32	1
Y Carrier	89.3		40 - 110					06/26/18 12:03	07/18/18 17:32	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0721	U	0.210	0.210	5.00	0.315	pCi/L		07/23/18 10:05	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-1
Date Collected: 06/14/18 14:57
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376496	07/19/18 07:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-2
Date Collected: 06/14/18 14:11
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376496	07/19/18 07:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-3
Date Collected: 06/14/18 12:25
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376496	07/19/18 07:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-4
Date Collected: 06/14/18 11:18
Date Received: 06/15/18 12:12

Lab Sample ID: 400-155153-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376497	07/19/18 07:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-155153-5

Date Collected: 06/14/18 10:01

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376497	07/19/18 07:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-155153-6

Date Collected: 06/14/18 09:10

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376497	07/19/18 07:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-155153-7

Date Collected: 06/14/18 08:15

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376497	07/19/18 07:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:31	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-155153-8

Date Collected: 06/14/18 07:05

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376498	07/19/18 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-155153-9

Date Collected: 06/13/18 12:03

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376498	07/19/18 16:26	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-155153-10

Date Collected: 06/13/18 10:48

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376498	07/19/18 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-155153-11

Date Collected: 06/14/18 06:05

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376498	07/19/18 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Client Sample ID: FB-01

Lab Sample ID: 400-155153-12

Date Collected: 06/14/18 12:00

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376495	07/19/18 07:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Client Sample ID: EB-01

Lab Sample ID: 400-155153-13

Date Collected: 06/14/18 15:10

Matrix: Water

Date Received: 06/15/18 12:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			372551	06/26/18 10:49	JLC	TAL SL
Total/NA	Analysis	9315		1	376495	07/19/18 07:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			372643	06/26/18 12:03	JLC	TAL SL
Total/NA	Analysis	9320		1	376391	07/18/18 17:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	377251	07/23/18 10:05	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
 SDG: Ash Pond

Rad

Prep Batch: 372551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	PrecSep-21	
400-155153-2	APMW-2	Total/NA	Water	PrecSep-21	
400-155153-3	APMW-3	Total/NA	Water	PrecSep-21	
400-155153-4	APMW-4	Total/NA	Water	PrecSep-21	
400-155153-5	APMW-5	Total/NA	Water	PrecSep-21	
400-155153-6	APMW-6	Total/NA	Water	PrecSep-21	
400-155153-7	APMW-7	Total/NA	Water	PrecSep-21	
400-155153-8	APMW-8	Total/NA	Water	PrecSep-21	
400-155153-9	APMW-9	Total/NA	Water	PrecSep-21	
400-155153-10	APMW-10	Total/NA	Water	PrecSep-21	
400-155153-11	DUP-01	Total/NA	Water	PrecSep-21	
400-155153-12	FB-01	Total/NA	Water	PrecSep-21	
400-155153-13	EB-01	Total/NA	Water	PrecSep-21	
MB 160-372551/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-372551/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-96977-BG-1-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 372643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-155153-1	APMW-1	Total/NA	Water	PrecSep_0	
400-155153-2	APMW-2	Total/NA	Water	PrecSep_0	
400-155153-3	APMW-3	Total/NA	Water	PrecSep_0	
400-155153-4	APMW-4	Total/NA	Water	PrecSep_0	
400-155153-5	APMW-5	Total/NA	Water	PrecSep_0	
400-155153-6	APMW-6	Total/NA	Water	PrecSep_0	
400-155153-7	APMW-7	Total/NA	Water	PrecSep_0	
400-155153-8	APMW-8	Total/NA	Water	PrecSep_0	
400-155153-9	APMW-9	Total/NA	Water	PrecSep_0	
400-155153-10	APMW-10	Total/NA	Water	PrecSep_0	
400-155153-11	DUP-01	Total/NA	Water	PrecSep_0	
400-155153-12	FB-01	Total/NA	Water	PrecSep_0	
400-155153-13	EB-01	Total/NA	Water	PrecSep_0	
MB 160-372643/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-372643/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-96977-BG-1-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-372551/23-A
Matrix: Water
Analysis Batch: 376495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372551

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.008835	U	0.0977	0.0977	1.00	0.208	pCi/L	06/26/18 10:49	07/19/18 07:53	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					06/26/18 10:49	07/19/18 07:53	1

Lab Sample ID: LCS 160-372551/1-A
Matrix: Water
Analysis Batch: 376496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372551

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.888		1.22	1.00	0.167	pCi/L	87	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	108		40 - 110						

Lab Sample ID: 240-96977-BG-1-A DU
Matrix: Water
Analysis Batch: 376496

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 372551

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0199	U	0.2225	U	0.165	1.00	0.229	pCi/L	0.69	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	102		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-372643/23-A
Matrix: Water
Analysis Batch: 376393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372643

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.03129	U	0.189	0.189	1.00	0.333	pCi/L	06/26/18 12:03	07/18/18 17:34	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					06/26/18 12:03	07/18/18 17:34	1
Y Carrier	89.3		40 - 110					06/26/18 12:03	07/18/18 17:34	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-372643/1-A
Matrix: Water
Analysis Batch: 376391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372643

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.14	7.808		0.914	1.00	0.343	pCi/L	96	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	108		40 - 110
Y Carrier	89.7		40 - 110

Lab Sample ID: 240-96977-BG-1-B DU
Matrix: Water
Analysis Batch: 376391

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 372643

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0771	U	0.1326	U	0.201	1.00	0.338	pCi/L	0.14	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	92.7		40 - 110


Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-155115-A-3 DU
Matrix: Water
Analysis Batch: 377251

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.773		0.3811	U	0.328	5.00	0.477	pCi/L	0.58	

Chain of Custody Record

Client Information Client Contact: <u>Beck Scales</u> Mr. Cale Sellers Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-73764-29084.1 Page: Page 1 of 2 Job #: 155153	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested  400-155153 COC	
Sample Identification Sample ID: APMW-1 to APMW-10 Sample Date: 6/14/18 Sample Time: 1457, 1411, 1225, 1118, 1001, 0910, 0815, 0705, 1203, 1048, 0605 Sample Type: G (Grab) Matrix: Water		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SM4500 Cl E - Chloride, SM4500 SO4 F - Sulfate, 4500 F C - Fluoride, 2540C - TDS, 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Tl, 7470A - Hg	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: Total Number of Containers:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Method of Shipment: _____ Date/Time: 6/15/18 1212 Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature and other Remarks: 2.5°C 5/31/18 by 4.2°C 2.6°C 1/10/18	



Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):	
Client Contact: Mr. Cale Sellers		Phone: 380 3454		COC No: 400-73764-29084.2	
Company: Southern Company		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 2	
Address: PO BOX 2641 GSC8		City: Birmingham		Job #: 155153	
State, Zip: AL, 35291		PO #: SCS10347656		Project #: 40009375	
Phone: 205-992-7762(Tel)		W/O #: CBSELLER@SOUTHERNCO.COM		Site: Ash Pond	
Email: Project Name: CCR -Plant Watson		SSOW#: Ash Pond		Due Date Requested:	
Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Sample Type (C=comp, G=grab)		Sample Time	
Sample Date		Sample Time		Sample Date	
Sample Identification		Sample Time		Sample Date	
FB-01		G		6/14/18 1200	
CB-01		G		6/14/18 1510	
Special Instructions/Note:		Matrix		Sample Time	
Total Number of containers		Sample Type		Sample Date	
Perform MS/MSD (Yes or No)		Sample Time		Sample Date	
Field Filtered Sample (Yes or No)		Sample Time		Sample Date	
9315_Ra226, 9320_Ra228, Ra226Ra228 GFPC		Sample Time		Sample Date	
SM4500 Cl ⁻ Chloride, SM4500 SO ₄ ²⁻ Sulfate,		Sample Time		Sample Date	
4500 F ⁻ Fluoride, 2540C - TDS		Sample Time		Sample Date	
6020 -Sb,As, Ba,Ba,Be,Ca,Cd,Cr,Co,Pb,LI,Mo,Se,Tl, 7470A -Hg		Sample Time		Sample Date	
Analysis Requested		Sample Time		Sample Date	
Preservation Codes:		Sample Time		Sample Date	
A - HCL, M - Hexane, N - None, O - AsNaO2, P - Na2OAS, Q - NaZSO3, R - NaZSO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, X - EDTA, L - EDTA, Z - other (specify)		Sample Time		Sample Date	
Other:		Sample Time		Sample Date	
Possible Hazard Identification		Sample Time		Sample Date	
<input type="checkbox"/> Non-Hazard, <input type="checkbox"/> Flammable, <input type="checkbox"/> Skin Irritant		Sample Time		Sample Date	
Deliverable Requested: I, II, III, IV, Other (specify)		Sample Time		Sample Date	
Empty Kit Relinquished by:		Sample Time		Sample Date	
Relinquished by: [Signature]		Sample Time		Sample Date	
Relinquished by:		Sample Time		Sample Date	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Time		Sample Date	
Custody Seal No.:		Sample Time		Sample Date	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Sample Time		Sample Date	
<input type="checkbox"/> Return To Client, <input type="checkbox"/> Disposal By Lab, <input type="checkbox"/> Archive For Months		Sample Time		Sample Date	
Special Instructions/QC Requirements:		Sample Time		Sample Date	
Received by: [Signature]		Sample Time		Sample Date	
Date/Time: 6/15/18 1212		Sample Time		Sample Date	
Company: [Signature]		Sample Time		Sample Date	
Cooler Temperature(s) °C and Other Remarks:		Sample Time		Sample Date	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-155153-2

SDG Number: Ash Pond

Login Number: 155153

List Number: 1

Creator: Whitmire, Cheyenne R

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5°C,3.1°C,4.2°C,2.6°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-155153-2

SDG Number: Ash Pond

Login Number: 155153

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 06/19/18 04:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18, 18, 18
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-18 *
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-155153-2
 SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-18 *
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-18 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18 *
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-17-11	07-31-18 *
US Fish & Wildlife	Federal		058448	07-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-156862-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

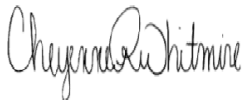
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

8/20/2018 11:45:47 AM

Cheyenne Whitmire, Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Job ID: 400-156862-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-156862-1

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-156862-1), APMW-2 (400-156862-2), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-5 (400-156862-5), APMW-6 (400-156862-6), APMW-8 (400-156862-8), APMW-9 (400-156862-9), APMW-10 (400-156862-10), DUP-01 (400-156862-11) and DUP-02 (400-156862-12). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 406637 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-156862-1), APMW-2 (400-156862-2), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-5 (400-156862-5), APMW-6 (400-156862-6), APMW-7 (400-156862-7), APMW-8 (400-156862-8), APMW-9 (400-156862-9), APMW-10 (400-156862-10), DUP-01 (400-156862-11) and DUP-02 (400-156862-12). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of Sulfate in the parent sample, the sample, matrix spike, and matrix spike duplicate were diluted after the spike and the spike amounts were adjusted for the dilution factor. (400-156855-A-4 MS), (400-156855-A-4 MSD), (400-156990-A-3 MS) and (400-156990-A-3 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 406901 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-5 (400-156862-5), APMW-6 (400-156862-6), APMW-7 (400-156862-7), APMW-8 (400-156862-8), APMW-9 (400-156862-9), APMW-10 (400-156862-10), DUP-01 (400-156862-11), DUP-02 (400-156862-12), (400-156855-A-4), (400-156855-A-4 MS), (400-156855-A-4 MSD), (400-156990-A-3), (400-156990-A-3 MS) and (400-156990-A-3 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-156862-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.66		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0094		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00051	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	3.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	260		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	3700		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1600		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	11		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.97				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-156862-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	3.0		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.023		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00037	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	4.3		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	370		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	6000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	2.7	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.03				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-156862-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.093		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.079		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.065		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00087	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	5.5		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	360		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	18000		130	85	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-156862-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11000		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.42		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1100		200	56	mg/L	40		SM 4500 SO4 E	Total/NA
Field pH	6.6				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-156862-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.54		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0022	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0036		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.057		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0075	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00036	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	210		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3900		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.52		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	310		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.34				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-156862-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.23		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.093		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.049		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.078		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00060	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.9		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	340		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	15000		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	8700		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	950		200	56	mg/L	40		SM 4500 SO4 E	Total/NA
Field pH	6.35				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-156862-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.53		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00041	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium	0.0020	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00060	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.025		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00043	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	15		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	200		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.1		0.30	0.017	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	3700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	340		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.85				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-156862-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.72		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.0		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	100		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0030	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0063	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00036	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3900		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	52		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.34				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-156862-8

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-8 (Continued)

Lab Sample ID: 400-156862-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.094		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.20		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.090		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.17		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00060	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	22		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	520		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	7200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3500		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	610		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.7				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-156862-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.42		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0041	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.00041	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.8		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	5800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3000		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	280		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.19				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-156862-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.13		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	73		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.015		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.11		0.015	0.00085	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-10 (Continued)

Lab Sample ID: 400-156862-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00035	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	2.0		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	3100		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1200		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.76		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.76				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-156862-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.094		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.20		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.091		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.17		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00039	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	21		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	520		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	7700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3400		160	48	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	630		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-156862-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.22		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.092		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.049		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.079		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00052	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	6.6		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	330		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	13000		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	8600		600	180	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	950		200	56	mg/L	40		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: FB-01

Lab Sample ID: 400-156862-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	3.1		0.25	0.13	mg/L	5		6020	Total
Selenium	0.0011	J	0.0013	0.00024	mg/L	5		6020	Recoverable Total
Chloride	0.92	J	2.0	0.60	mg/L	1		SM 4500 Cl- E	Recoverable Total/NA
Sulfate	1.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-156862-1	APMW-1	Water	07/24/18 09:23	07/25/18 10:10
400-156862-2	APMW-2	Water	07/24/18 10:42	07/25/18 10:10
400-156862-3	APMW-3	Water	07/24/18 11:40	07/25/18 10:10
400-156862-4	APMW-4	Water	07/24/18 14:38	07/25/18 10:10
400-156862-5	APMW-5	Water	07/24/18 15:59	07/25/18 10:10
400-156862-6	APMW-6	Water	07/24/18 17:39	07/25/18 10:10
400-156862-7	APMW-7	Water	07/24/18 18:58	07/25/18 10:10
400-156862-8	APMW-8	Water	07/23/18 17:15	07/25/18 10:10
400-156862-9	APMW-9	Water	07/23/18 15:45	07/25/18 10:10
400-156862-10	APMW-10	Water	07/23/18 13:47	07/25/18 10:10
400-156862-11	DUP-01	Water	07/23/18 16:15	07/25/18 10:10
400-156862-12	DUP-02	Water	07/24/18 14:59	07/25/18 10:10
400-156862-13	FB-01	Water	07/24/18 15:46	07/25/18 10:10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-156862-1

Date Collected: 07/24/18 09:23

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:39	5
Barium	0.66		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:39	5
Lithium	0.0094		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:39	5
Selenium	0.00051	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:39	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.4		0.25	0.11	mg/L		08/03/18 10:29	08/06/18 14:46	25
Calcium	260		1.3	0.63	mg/L		08/03/18 10:29	08/06/18 14:46	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3700		25	17	mg/L			07/25/18 11:32	1
Chloride	1600		160	48	mg/L			08/06/18 09:59	80
Fluoride	0.090	J	0.10	0.032	mg/L			08/02/18 13:11	1
Sulfate	11		5.0	1.4	mg/L			08/05/18 12:33	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.97				SU			07/24/18 09:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-156862-2

Date Collected: 07/24/18 10:42

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:43	5
Barium	3.0		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:43	5
Lithium	0.023		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:43	5
Selenium	0.00037	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:43	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.3		0.25	0.11	mg/L		08/03/18 10:29	08/06/18 14:50	25
Calcium	370		1.3	0.63	mg/L		08/03/18 10:29	08/06/18 14:50	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 19:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6000		50	34	mg/L			07/25/18 11:32	1
Chloride	2800		160	48	mg/L			08/06/18 09:59	80
Fluoride	0.070	J	0.10	0.032	mg/L			08/02/18 13:14	1
Sulfate	2.7	J	5.0	1.4	mg/L			08/05/18 12:33	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.03				SU			07/24/18 10:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-156862-3

Date Collected: 07/24/18 11:40

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:48	5
Arsenic	0.093		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:48	5
Barium	0.10		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:48	5
Cobalt	0.0026		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:48	5
Lithium	0.079		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:48	5
Molybdenum	0.065		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:48	5
Selenium	0.00087	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:48	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		0.25	0.11	mg/L		08/03/18 10:29	08/06/18 14:55	25
Calcium	360		1.3	0.63	mg/L		08/03/18 10:29	08/06/18 14:55	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 19:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18000		130	85	mg/L			07/25/18 11:32	1
Chloride	11000		600	180	mg/L			08/06/18 10:32	300
Fluoride	0.42		0.10	0.032	mg/L			08/02/18 13:17	1
Sulfate	1100		200	56	mg/L			08/05/18 14:09	40

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.6				SU			07/24/18 11:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-156862-4

Date Collected: 07/24/18 14:38

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:52	5
Arsenic	0.018		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:52	5
Barium	0.54		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:52	5
Chromium	0.0022	J	0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:52	5
Cobalt	0.0036		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:52	5
Lithium	0.057		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:52	5
Molybdenum	0.0075	J	0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:52	5
Selenium	0.00036	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:52	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		08/03/18 10:29	08/06/18 14:59	25
Calcium	210		1.3	0.63	mg/L		08/03/18 10:29	08/06/18 14:59	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 19:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7000		50	34	mg/L			07/26/18 18:30	1
Chloride	3900		160	48	mg/L			08/06/18 10:02	80
Fluoride	0.52		0.10	0.032	mg/L			08/02/18 13:19	1
Sulfate	310		50	14	mg/L			08/05/18 13:33	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.34				SU			07/24/18 14:38	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-156862-5

Date Collected: 07/24/18 15:59

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:57	5
Arsenic	0.23		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:57	5
Barium	0.093		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:57	5
Lithium	0.049		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:57	5
Molybdenum	0.078		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:57	5
Selenium	0.00060	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:57	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.9		0.50	0.21	mg/L		08/03/18 10:29	08/06/18 15:04	50
Calcium	340		2.5	1.3	mg/L		08/03/18 10:29	08/06/18 15:04	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 19:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	15000		130	85	mg/L			07/25/18 11:32	1
Chloride	8700		600	180	mg/L			08/06/18 10:32	300
Fluoride	0.090	J	0.10	0.032	mg/L			08/02/18 13:22	1
Sulfate	950		200	56	mg/L			08/05/18 14:09	40

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.35				SU			07/24/18 15:59	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-156862-6

Date Collected: 07/24/18 17:39

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:01	5
Arsenic	0.53		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:01	5
Barium	0.23		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:01	5
Cadmium	0.00041	J	0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:01	5
Chromium	0.0020	J	0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:01	5
Cobalt	0.00060	J	0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:01	5
Lithium	0.025		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:01	5
Selenium	0.00043	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:01	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		1.0	0.42	mg/L		08/03/18 10:29	08/06/18 15:08	100
Calcium	200		5.0	2.5	mg/L		08/03/18 10:29	08/06/18 15:08	100
Molybdenum	1.1		0.30	0.017	mg/L		08/03/18 10:29	08/06/18 15:08	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3700		50	34	mg/L			07/26/18 18:30	1
Chloride	2300		160	48	mg/L			08/06/18 10:02	80
Fluoride	1.1		0.10	0.032	mg/L			08/02/18 13:24	1
Sulfate	340		50	14	mg/L			08/05/18 13:33	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.85				SU			07/24/18 17:39	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-156862-7

Date Collected: 07/24/18 18:58

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:06	5
Arsenic	0.0015		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:06	5
Barium	0.72		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:06	5
Boron	1.0		0.050	0.021	mg/L		08/03/18 10:29	08/04/18 01:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:06	5
Calcium	100		0.25	0.13	mg/L		08/03/18 10:29	08/04/18 01:06	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:06	5
Lithium	0.0030	J	0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:06	5
Molybdenum	0.0063	J	0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:06	5
Selenium	0.00036	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7200		50	34	mg/L			07/26/18 18:30	1
Chloride	3900		160	48	mg/L			08/06/18 10:02	80
Fluoride	0.12		0.10	0.032	mg/L			08/02/18 13:26	1
Sulfate	52		25	7.0	mg/L			08/05/18 13:37	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.34				SU			07/24/18 18:58	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-156862-8

Date Collected: 07/23/18 17:15

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:33	5
Arsenic	0.094		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:33	5
Barium	0.20		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:33	5
Lithium	0.090		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:33	5
Molybdenum	0.17		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:33	5
Selenium	0.00060	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:33	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	22		2.0	0.84	mg/L		08/03/18 10:29	08/06/18 15:13	200
Calcium	520		10	5.0	mg/L		08/03/18 10:29	08/06/18 15:13	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7200		50	34	mg/L			07/26/18 18:30	1
Chloride	3500		160	48	mg/L			08/02/18 10:00	80
Fluoride	1.0		0.10	0.032	mg/L			08/02/18 13:41	1
Sulfate	610		100	28	mg/L			08/05/18 13:24	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.7				SU			07/23/18 17:15	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-156862-9

Date Collected: 07/23/18 15:45

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:37	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:37	5
Barium	0.42		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:37	5
Lithium	0.0041	J	0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:37	5
Selenium	0.00041	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:37	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.8		0.50	0.21	mg/L		08/03/18 10:29	08/06/18 15:18	50
Calcium	320		2.5	1.3	mg/L		08/03/18 10:29	08/06/18 15:18	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5800		50	34	mg/L			07/25/18 11:32	1
Chloride	3000		160	48	mg/L			08/02/18 10:01	80
Fluoride	0.060	J	0.10	0.032	mg/L			08/06/18 13:51	1
Sulfate	280		50	14	mg/L			08/05/18 13:28	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.19				SU			07/23/18 15:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-156862-10

Date Collected: 07/23/18 13:47

Matrix: Water

Date Received: 07/25/18 10:10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:42	5
Arsenic	0.13		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:42	5
Barium	0.24		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:42	5
Calcium	73		0.25	0.13	mg/L		08/03/18 10:29	08/04/18 01:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:42	5
Lithium	0.015		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:42	5
Molybdenum	0.11		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:42	5
Selenium	0.00035	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:42	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.0		0.25	0.11	mg/L		08/03/18 10:29	08/06/18 15:22	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3100		25	17	mg/L			07/25/18 11:32	1
Chloride	1200		160	48	mg/L			08/06/18 09:59	80
Fluoride	0.76		0.10	0.032	mg/L			08/02/18 13:43	1
Sulfate	300		50	14	mg/L			08/05/18 13:37	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.76				SU			07/23/18 13:47	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 07/23/18 16:15
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:46	5
Arsenic	0.094		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:46	5
Barium	0.20		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:46	5
Lithium	0.091		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:46	5
Molybdenum	0.17		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:46	5
Selenium	0.00039	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	21		2.0	0.84	mg/L		08/03/18 10:29	08/06/18 15:49	200
Calcium	520		10	5.0	mg/L		08/03/18 10:29	08/06/18 15:49	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7700		50	34	mg/L			07/25/18 11:32	1
Chloride	3400		160	48	mg/L			08/06/18 09:59	80
Fluoride	1.0		0.10	0.032	mg/L			08/02/18 13:45	1
Sulfate	630		100	28	mg/L			08/05/18 13:28	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 07/24/18 14:59
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 01:51	5
Arsenic	0.22		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 01:51	5
Barium	0.092		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 01:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 01:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 01:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 01:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 01:51	5
Lithium	0.049		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 01:51	5
Molybdenum	0.079		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 01:51	5
Selenium	0.00052	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 01:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 01:51	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.6		0.50	0.21	mg/L		08/03/18 10:29	08/06/18 15:54	50
Calcium	330		2.5	1.3	mg/L		08/03/18 10:29	08/06/18 15:54	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	13000		130	85	mg/L			07/26/18 18:30	1
Chloride	8600		600	180	mg/L			08/06/18 10:32	300
Fluoride	0.10		0.10	0.032	mg/L			08/02/18 13:47	1
Sulfate	950		200	56	mg/L			08/05/18 14:09	40

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 07/24/18 15:46
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-13
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/04/18 00:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/03/18 10:29	08/04/18 00:34	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/03/18 10:29	08/04/18 00:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:34	5
Boron	<0.021		0.050	0.021	mg/L		08/03/18 10:29	08/04/18 00:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/04/18 00:34	5
Calcium	3.1		0.25	0.13	mg/L		08/03/18 10:29	08/04/18 00:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/04/18 00:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/04/18 00:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/04/18 00:34	5
Lithium	<0.0011		0.0050	0.0011	mg/L		08/03/18 10:29	08/04/18 00:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/03/18 10:29	08/04/18 00:34	5
Selenium	0.0011	J	0.0013	0.00024	mg/L		08/03/18 10:29	08/04/18 00:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/04/18 00:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 17:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/26/18 18:30	1
Chloride	0.92	J	2.0	0.60	mg/L			08/06/18 09:22	1
Fluoride	<0.032		0.10	0.032	mg/L			08/02/18 13:51	1
Sulfate	1.9	J	5.0	1.4	mg/L			08/05/18 12:37	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 07/24/18 09:23

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	407093	08/06/18 14:46	DRE	TAL PEN
Total/NA	Prep	7470A			406265	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 19:09	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 09:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:11	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	406901	08/05/18 12:33	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 09:23	CDH	TAL PEN

Client Sample ID: APMW-2

Date Collected: 07/24/18 10:42

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:43	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	407093	08/06/18 14:50	DRE	TAL PEN
Total/NA	Prep	7470A			406265	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 19:16	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 09:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:14	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	406901	08/05/18 12:33	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 10:42	CDH	TAL PEN

Client Sample ID: APMW-3

Date Collected: 07/24/18 11:40

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:48	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	407093	08/06/18 14:55	DRE	TAL PEN
Total/NA	Prep	7470A			406265	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 19:18	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	406968	08/06/18 10:32	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-156862-3

Date Collected: 07/24/18 11:40

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	406901	08/05/18 14:09	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 11:40	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-156862-4

Date Collected: 07/24/18 14:38

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:52	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	407093	08/06/18 14:59	DRE	TAL PEN
Total/NA	Prep	7470A			406265	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 19:19	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		80	406968	08/06/18 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:19	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	406901	08/05/18 13:33	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 14:38	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-156862-5

Date Collected: 07/24/18 15:59

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	407093	08/06/18 15:04	DRE	TAL PEN
Total/NA	Prep	7470A			406265	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 19:21	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		300	406968	08/06/18 10:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	406901	08/05/18 14:09	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 15:59	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-156862-6

Date Collected: 07/24/18 17:39

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	407093	08/06/18 15:08	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:19	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:24	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	406901	08/05/18 13:33	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 17:39	CDH	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-156862-7

Date Collected: 07/24/18 18:58

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:06	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:20	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 10:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	406901	08/05/18 13:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/24/18 18:58	CDH	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-156862-8

Date Collected: 07/23/18 17:15

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	407093	08/06/18 15:13	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:22	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406637	08/02/18 10:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	406901	08/05/18 13:24	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: APMW-8

Date Collected: 07/23/18 17:15

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	406639	07/23/18 17:15	CDH	TAL PEN

Client Sample ID: APMW-9

Date Collected: 07/23/18 15:45

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:37	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	407093	08/06/18 15:18	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:24	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406637	08/02/18 10:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	407022	08/06/18 13:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	406901	08/05/18 13:28	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/23/18 15:45	CDH	TAL PEN

Client Sample ID: APMW-10

Date Collected: 07/23/18 13:47

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:42	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	407093	08/06/18 15:22	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:39	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 09:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	406901	08/05/18 13:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	406639	07/23/18 13:47	CDH	TAL PEN

Client Sample ID: DUP-01

Date Collected: 07/23/18 16:15

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Client Sample ID: DUP-01

Lab Sample ID: 400-156862-11

Date Collected: 07/23/18 16:15

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	407093	08/06/18 15:49	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:43	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405679	07/25/18 11:32	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	406968	08/06/18 09:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:45	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	406901	08/05/18 13:28	RRC	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-156862-12

Date Collected: 07/24/18 14:59

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 01:51	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	407093	08/06/18 15:54	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:44	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	406968	08/06/18 10:32	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	406901	08/05/18 14:09	RRC	TAL PEN

Client Sample ID: FB-01

Lab Sample ID: 400-156862-13

Date Collected: 07/24/18 15:46

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			406749	08/03/18 10:29	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	406964	08/04/18 00:34	DRE	TAL PEN
Total/NA	Prep	7470A			406267	08/01/18 11:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	406566	08/01/18 17:46	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	405791	07/26/18 18:30	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	406968	08/06/18 09:22	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	406665	08/02/18 13:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	406901	08/05/18 12:37	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Metals

Prep Batch: 406265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	7470A	
400-156862-2	APMW-2	Total/NA	Water	7470A	
400-156862-3	APMW-3	Total/NA	Water	7470A	
400-156862-4	APMW-4	Total/NA	Water	7470A	
400-156862-5	APMW-5	Total/NA	Water	7470A	
MB 400-406265/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-406265/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-156884-J-1-E MS	Matrix Spike	Total/NA	Water	7470A	
400-156884-K-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 406267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-6	APMW-6	Total/NA	Water	7470A	
400-156862-7	APMW-7	Total/NA	Water	7470A	
400-156862-8	APMW-8	Total/NA	Water	7470A	
400-156862-9	APMW-9	Total/NA	Water	7470A	
400-156862-10	APMW-10	Total/NA	Water	7470A	
400-156862-11	DUP-01	Total/NA	Water	7470A	
400-156862-12	DUP-02	Total/NA	Water	7470A	
400-156862-13	FB-01	Total/NA	Water	7470A	
MB 400-406267/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-406267/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-156862-9 MS	APMW-9	Total/NA	Water	7470A	
400-156862-9 MSD	APMW-9	Total/NA	Water	7470A	
400-156862-10 MS	APMW-10	Total/NA	Water	7470A	

Analysis Batch: 406566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	7470A	406265
400-156862-2	APMW-2	Total/NA	Water	7470A	406265
400-156862-3	APMW-3	Total/NA	Water	7470A	406265
400-156862-4	APMW-4	Total/NA	Water	7470A	406265
400-156862-5	APMW-5	Total/NA	Water	7470A	406265
400-156862-6	APMW-6	Total/NA	Water	7470A	406267
400-156862-7	APMW-7	Total/NA	Water	7470A	406267
400-156862-8	APMW-8	Total/NA	Water	7470A	406267
400-156862-9	APMW-9	Total/NA	Water	7470A	406267
400-156862-10	APMW-10	Total/NA	Water	7470A	406267
400-156862-11	DUP-01	Total/NA	Water	7470A	406267
400-156862-12	DUP-02	Total/NA	Water	7470A	406267
400-156862-13	FB-01	Total/NA	Water	7470A	406267
MB 400-406265/13-A	Method Blank	Total/NA	Water	7470A	406265
MB 400-406267/13-A	Method Blank	Total/NA	Water	7470A	406267
LCS 400-406265/14-A	Lab Control Sample	Total/NA	Water	7470A	406265
LCS 400-406267/14-A	Lab Control Sample	Total/NA	Water	7470A	406267
400-156862-9 MS	APMW-9	Total/NA	Water	7470A	406267
400-156862-9 MSD	APMW-9	Total/NA	Water	7470A	406267
400-156862-10 MS	APMW-10	Total/NA	Water	7470A	406267
400-156884-J-1-E MS	Matrix Spike	Total/NA	Water	7470A	406265
400-156884-K-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	406265

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
 SDG: Ash Pond

Metals (Continued)

Prep Batch: 406749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-156862-1	APMW-1	Total Recoverable	Water	3005A	
400-156862-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-156862-2	APMW-2	Total Recoverable	Water	3005A	
400-156862-3	APMW-3	Total Recoverable	Water	3005A	
400-156862-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-156862-4	APMW-4	Total Recoverable	Water	3005A	
400-156862-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-156862-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-156862-5	APMW-5	Total Recoverable	Water	3005A	
400-156862-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-156862-6	APMW-6	Total Recoverable	Water	3005A	
400-156862-7	APMW-7	Total Recoverable	Water	3005A	
400-156862-8	APMW-8	Total Recoverable	Water	3005A	
400-156862-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-156862-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-156862-9	APMW-9	Total Recoverable	Water	3005A	
400-156862-10	APMW-10	Total Recoverable	Water	3005A	
400-156862-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-156862-11	DUP-01	Total Recoverable	Water	3005A	
400-156862-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-156862-12	DUP-02	Total Recoverable	Water	3005A	
400-156862-12 - DL	DUP-02	Total Recoverable	Water	3005A	
400-156862-13	FB-01	Total Recoverable	Water	3005A	
MB 400-406749/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-406749/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-157050-D-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-157050-D-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 406964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total Recoverable	Water	6020	406749
400-156862-2	APMW-2	Total Recoverable	Water	6020	406749
400-156862-3	APMW-3	Total Recoverable	Water	6020	406749
400-156862-4	APMW-4	Total Recoverable	Water	6020	406749
400-156862-5	APMW-5	Total Recoverable	Water	6020	406749
400-156862-6	APMW-6	Total Recoverable	Water	6020	406749
400-156862-7	APMW-7	Total Recoverable	Water	6020	406749
400-156862-8	APMW-8	Total Recoverable	Water	6020	406749
400-156862-9	APMW-9	Total Recoverable	Water	6020	406749
400-156862-10	APMW-10	Total Recoverable	Water	6020	406749
400-156862-11	DUP-01	Total Recoverable	Water	6020	406749
400-156862-12	DUP-02	Total Recoverable	Water	6020	406749
400-156862-13	FB-01	Total Recoverable	Water	6020	406749
MB 400-406749/1-A ^5	Method Blank	Total Recoverable	Water	6020	406749
LCS 400-406749/2-A	Lab Control Sample	Total Recoverable	Water	6020	406749
400-157050-D-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	406749
400-157050-D-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	406749

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 407093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1 - DL	APMW-1	Total Recoverable	Water	6020	406749
400-156862-2 - DL	APMW-2	Total Recoverable	Water	6020	406749
400-156862-3 - DL	APMW-3	Total Recoverable	Water	6020	406749
400-156862-4 - DL	APMW-4	Total Recoverable	Water	6020	406749
400-156862-5 - DL	APMW-5	Total Recoverable	Water	6020	406749
400-156862-6 - DL	APMW-6	Total Recoverable	Water	6020	406749
400-156862-8 - DL	APMW-8	Total Recoverable	Water	6020	406749
400-156862-9 - DL	APMW-9	Total Recoverable	Water	6020	406749
400-156862-10 - DL	APMW-10	Total Recoverable	Water	6020	406749
400-156862-11 - DL	DUP-01	Total Recoverable	Water	6020	406749
400-156862-12 - DL	DUP-02	Total Recoverable	Water	6020	406749

General Chemistry

Analysis Batch: 405679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	SM 2540C	
400-156862-2	APMW-2	Total/NA	Water	SM 2540C	
400-156862-3	APMW-3	Total/NA	Water	SM 2540C	
400-156862-5	APMW-5	Total/NA	Water	SM 2540C	
400-156862-9	APMW-9	Total/NA	Water	SM 2540C	
400-156862-10	APMW-10	Total/NA	Water	SM 2540C	
400-156862-11	DUP-01	Total/NA	Water	SM 2540C	
MB 400-405679/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-405679/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156710-B-10 DU	Duplicate	Total/NA	Water	SM 2540C	
400-156796-B-7 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 405791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-4	APMW-4	Total/NA	Water	SM 2540C	
400-156862-6	APMW-6	Total/NA	Water	SM 2540C	
400-156862-7	APMW-7	Total/NA	Water	SM 2540C	
400-156862-8	APMW-8	Total/NA	Water	SM 2540C	
400-156862-12	DUP-02	Total/NA	Water	SM 2540C	
400-156862-13	FB-01	Total/NA	Water	SM 2540C	
MB 400-405791/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-405791/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-156796-B-5 DU	Duplicate	Total/NA	Water	SM 2540C	
400-156881-D-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 406637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-8	APMW-8	Total/NA	Water	SM 4500 CI- E	
400-156862-9	APMW-9	Total/NA	Water	SM 4500 CI- E	
MB 400-406637/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-406637/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-406637/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-156796-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-156796-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 406665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-156862-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-156862-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-156862-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-156862-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-156862-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-156862-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-156862-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-156862-10	APMW-10	Total/NA	Water	SM 4500 F C	
400-156862-11	DUP-01	Total/NA	Water	SM 4500 F C	
400-156862-12	DUP-02	Total/NA	Water	SM 4500 F C	
400-156862-13	FB-01	Total/NA	Water	SM 4500 F C	
MB 400-406665/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-406665/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
240-99206-D-31 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
240-99206-D-31 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-156472-A-5 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 406901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-156862-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-156862-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-156862-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-156862-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-156862-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-156862-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-156862-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-156862-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-156862-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-156862-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-156862-12	DUP-02	Total/NA	Water	SM 4500 SO4 E	
400-156862-13	FB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-406901/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-406901/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-406901/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-156855-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-156855-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-156990-A-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-156990-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 406968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-156862-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-156862-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-156862-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-156862-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
400-156862-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-156862-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-156862-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 406968 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-156862-12	DUP-02	Total/NA	Water	SM 4500 Cl- E	
400-156862-13	FB-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-406968/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-406968/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-406968/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-156917-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-156917-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 407022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-9	APMW-9	Total/NA	Water	SM 4500 F C	
MB 400-407022/7	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-407022/8	Lab Control Sample	Total/NA	Water	SM 4500 F C	
240-99406-C-5 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
240-99406-C-5 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Field Service / Mobile Lab

Analysis Batch: 406639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	Field Sampling	
400-156862-2	APMW-2	Total/NA	Water	Field Sampling	
400-156862-3	APMW-3	Total/NA	Water	Field Sampling	
400-156862-4	APMW-4	Total/NA	Water	Field Sampling	
400-156862-5	APMW-5	Total/NA	Water	Field Sampling	
400-156862-6	APMW-6	Total/NA	Water	Field Sampling	
400-156862-7	APMW-7	Total/NA	Water	Field Sampling	
400-156862-8	APMW-8	Total/NA	Water	Field Sampling	
400-156862-9	APMW-9	Total/NA	Water	Field Sampling	
400-156862-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-406749/1-A ^5
Matrix: Water
Analysis Batch: 406964

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 406749

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/03/18 10:29	08/03/18 23:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/03/18 10:29	08/03/18 23:40	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/03/18 10:29	08/03/18 23:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/03/18 23:40	5
Boron	<0.021		0.050	0.021	mg/L		08/03/18 10:29	08/03/18 23:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/03/18 10:29	08/03/18 23:40	5
Calcium	<0.13		0.25	0.13	mg/L		08/03/18 10:29	08/03/18 23:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/03/18 10:29	08/03/18 23:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/03/18 10:29	08/03/18 23:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/03/18 10:29	08/03/18 23:40	5
Lithium	<0.0011		0.0050	0.0011	mg/L		08/03/18 10:29	08/03/18 23:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/03/18 10:29	08/03/18 23:40	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/03/18 10:29	08/03/18 23:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/03/18 10:29	08/03/18 23:40	5

Lab Sample ID: LCS 400-406749/2-A
Matrix: Water
Analysis Batch: 406964

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 406749

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0513		mg/L		103	80 - 120
Arsenic	0.0500	0.0511		mg/L		102	80 - 120
Barium	0.0500	0.0496		mg/L		99	80 - 120
Beryllium	0.0500	0.0482		mg/L		96	80 - 120
Boron	0.100	0.0958		mg/L		96	80 - 120
Cadmium	0.0500	0.0496		mg/L		99	80 - 120
Calcium	5.00	4.99		mg/L		100	80 - 120
Chromium	0.0500	0.0517		mg/L		103	80 - 120
Cobalt	0.0500	0.0540		mg/L		108	80 - 120
Lead	0.0500	0.0509		mg/L		102	80 - 120
Lithium	0.0500	0.0508		mg/L		102	80 - 120
Molybdenum	0.0500	0.0558		mg/L		112	80 - 120
Selenium	0.0500	0.0527		mg/L		105	80 - 120
Thallium	0.0100	0.00987		mg/L		99	80 - 120

Lab Sample ID: 400-157050-D-1-B MS ^5
Matrix: Water
Analysis Batch: 406964

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 406749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0516		mg/L		103	75 - 125
Arsenic	<0.00046		0.0500	0.0550		mg/L		110	75 - 125
Barium	0.0072		0.0500	0.0566		mg/L		99	75 - 125
Beryllium	<0.00034		0.0500	0.0477		mg/L		95	75 - 125
Boron	<0.021		0.100	0.0960		mg/L		96	75 - 125
Cadmium	<0.00034		0.0500	0.0499		mg/L		100	75 - 125
Calcium	0.29		5.00	5.41		mg/L		102	75 - 125
Chromium	<0.0011		0.0500	0.0520		mg/L		104	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-157050-D-1-B MS ^5
Matrix: Water
Analysis Batch: 406964

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 406749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	<0.00040		0.0500	0.0548		mg/L		110	75 - 125
Lead	0.0024		0.0500	0.0517		mg/L		99	75 - 125
Lithium	<0.0011		0.0500	0.0494		mg/L		99	75 - 125
Molybdenum	<0.00085		0.0500	0.0523		mg/L		105	75 - 125
Selenium	0.0026		0.0500	0.0534		mg/L		102	75 - 125
Thallium	0.00010	J	0.0100	0.00986		mg/L		98	75 - 125

Lab Sample ID: 400-157050-D-1-C MSD ^5
Matrix: Water
Analysis Batch: 406964

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 406749

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0556		mg/L		111	75 - 125	1	20
Barium	0.0072		0.0500	0.0569		mg/L		99	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0471		mg/L		94	75 - 125	1	20
Boron	<0.021		0.100	0.0995		mg/L		99	75 - 125	4	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	3	20
Calcium	0.29		5.00	5.45		mg/L		103	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0524		mg/L		105	75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0551		mg/L		110	75 - 125	0	20
Lead	0.0024		0.0500	0.0516		mg/L		98	75 - 125	0	20
Lithium	<0.0011		0.0500	0.0495		mg/L		99	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0538		mg/L		108	75 - 125	3	20
Selenium	0.0026		0.0500	0.0541		mg/L		103	75 - 125	1	20
Thallium	0.00010	J	0.0100	0.00978		mg/L		97	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-406265/13-A
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 406265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 18:21	1

Lab Sample ID: LCS 400-406265/14-A
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000961		mg/L		95	80 - 120

Lab Sample ID: 400-156884-J-1-E MS
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 406265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00186		mg/L		93	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Lab Sample ID: 400-156884-K-1-A MSD
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 406265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00186		mg/L		92	80 - 120	0	20

Lab Sample ID: MB 400-406267/13-A
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 406267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/01/18 11:34	08/01/18 16:38	1

Lab Sample ID: LCS 400-406267/14-A
Matrix: Water
Analysis Batch: 406566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 406267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000946		mg/L		94	80 - 120

Lab Sample ID: 400-156862-9 MS
Matrix: Water
Analysis Batch: 406566

Client Sample ID: APMW-9
Prep Type: Total/NA
Prep Batch: 406267

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00186		mg/L		92	80 - 120

Lab Sample ID: 400-156862-9 MSD
Matrix: Water
Analysis Batch: 406566

Client Sample ID: APMW-9
Prep Type: Total/NA
Prep Batch: 406267

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00182		mg/L		90	80 - 120	2	20

Lab Sample ID: 400-156862-10 MS
Matrix: Water
Analysis Batch: 406566

Client Sample ID: APMW-10
Prep Type: Total/NA
Prep Batch: 406267

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00189		mg/L		94	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-405679/1
Matrix: Water
Analysis Batch: 405679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/25/18 11:32	1

Lab Sample ID: LCS 400-405679/2
Matrix: Water
Analysis Batch: 405679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	268		mg/L		91	78 - 122

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Lab Sample ID: 400-156710-B-10 DU
Matrix: Water
Analysis Batch: 405679

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	90		90.0		mg/L		0	5

Lab Sample ID: 400-156796-B-7 DU
Matrix: Water
Analysis Batch: 405679

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	190		190		mg/L		2	5

Lab Sample ID: MB 400-405791/1
Matrix: Water
Analysis Batch: 405791

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			07/26/18 18:30	1

Lab Sample ID: LCS 400-405791/2
Matrix: Water
Analysis Batch: 405791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	246		mg/L		84	78 - 122

Lab Sample ID: 400-156796-B-5 DU
Matrix: Water
Analysis Batch: 405791

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	250		246		mg/L		2	5

Lab Sample ID: 400-156881-D-3 DU
Matrix: Water
Analysis Batch: 405791

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	98		98.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-406637/6
Matrix: Water
Analysis Batch: 406637

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			08/02/18 09:19	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCS 400-406637/7
Matrix: Water
Analysis Batch: 406637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	30.9		mg/L		103	90 - 110

Lab Sample ID: MRL 400-406637/3
Matrix: Water
Analysis Batch: 406637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.85	J	mg/L		92	50 - 150

Lab Sample ID: 400-156796-B-1 MS
Matrix: Water
Analysis Batch: 406637

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	39	F1	10.0	46.2		mg/L		76	73 - 120

Lab Sample ID: 400-156796-B-1 MSD
Matrix: Water
Analysis Batch: 406637

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	39	F1	10.0	45.7	F1	mg/L		71	73 - 120	1	8

Lab Sample ID: MB 400-406968/6
Matrix: Water
Analysis Batch: 406968

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.60		2.0	0.60	mg/L			08/06/18 09:12	1

Lab Sample ID: LCS 400-406968/7
Matrix: Water
Analysis Batch: 406968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.0		mg/L		103	90 - 110

Lab Sample ID: MRL 400-406968/3
Matrix: Water
Analysis Batch: 406968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.12		mg/L		106	50 - 150

Lab Sample ID: 400-156917-F-1 MS
Matrix: Water
Analysis Batch: 406968

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.7		10.0	15.8		mg/L		101	73 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Lab Sample ID: 400-156917-F-1 MSD
Matrix: Water
Analysis Batch: 406968

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.7		10.0	15.4		mg/L		97	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-406665/3
Matrix: Water
Analysis Batch: 406665

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			08/02/18 12:46	1

Lab Sample ID: LCS 400-406665/4
Matrix: Water
Analysis Batch: 406665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

Lab Sample ID: 240-99206-D-31 MS
Matrix: Water
Analysis Batch: 406665

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.56		1.00	1.57		mg/L		101	75 - 125

Lab Sample ID: 240-99206-D-31 MSD
Matrix: Water
Analysis Batch: 406665

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.56		1.00	1.54		mg/L		98	75 - 125	2	4

Lab Sample ID: 400-156472-A-5 DU
Matrix: Water
Analysis Batch: 406665

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	4.7		4.69		mg/L		0	4

Lab Sample ID: MB 400-407022/7
Matrix: Water
Analysis Batch: 407022

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			08/06/18 13:17	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-407022/8
Matrix: Water
Analysis Batch: 407022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.94		mg/L		99	90 - 110

Lab Sample ID: 240-99406-C-5 MS
Matrix: Water
Analysis Batch: 407022

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.98		1.00	1.96		mg/L		98	75 - 125

Lab Sample ID: 240-99406-C-5 MSD
Matrix: Water
Analysis Batch: 407022

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.98		1.00	1.96		mg/L		98	75 - 125	0	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-406901/6
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			08/05/18 12:26	1

Lab Sample ID: LCS 400-406901/7
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.4		mg/L		96	90 - 110

Lab Sample ID: MRL 400-406901/3
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.36	J	mg/L		87	50 - 150

Lab Sample ID: 400-156855-A-4 MS
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2800		9.90	2630	4	mg/L		-1460	77 - 128

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-156855-A-4 MSD
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2800		9.90	2650	4	mg/L		-1287	77 - 128	1	5

Lab Sample ID: 400-156990-A-3 MS
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	50		10.0	56.3	4	mg/L		66	77 - 128		

Lab Sample ID: 400-156990-A-3 MSD
Matrix: Water
Analysis Batch: 406901

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	50		10.0	55.5	4	mg/L		58	77 - 128	1	5

Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Company: <u>Southern Company</u> Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CBSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Watson</u> Site: <u>Ash Pond</u>		Lab PM: <u>Whitmire, Cheyenne R</u> E-Mail: <u>cheyenne.whitmire@testamericainc.com</u> Carrier Tracking No(s): COC No: <u>400-73764-29084.1</u> Page: <u>Page 1 of 2</u> Job #:	
Due Date Requested: TAT Requested (days): PO #: <u>SCS10347656</u> WO #: <u>40009375</u> Project #: <u>40009375</u> SSOW#:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9315_Ra226_9320_Ra228_Ra226Ra228_GFPc SM4500_Cl_E - Chloride, SM4500_SO4_E - Sulfate, 4500_F_C - Fluoride, 2540C - TDS 6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mn, Se, Ti, T, 7470A - Hg	
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=wastefoli, BT=Tissue, A=Ab)		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA W - pH 4-5 Z - other (Specify) Other:	
APMW-1 APMW-2 APMW-3 APMW-4 APMW-5 APMW-6 APMW-7 APMW-8 APMW-9 APMW-10 Dup-01		Total Number of Containers 3 3 3 3 3 3 3 3 3 3	
Special Instructions/Note: 400-156862 COC		Special Instructions/Note: Special Instructions/QC Requirements: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <u>[Signature]</u> Date/Time: <u>7-25-18 1010</u> Company: <u>APM</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>7-25-18 1010</u> Company: <u>APM</u>	
Relinquished by: <u>[Signature]</u> Date/Time: <u>7-25-18 1010</u> Company: <u>APM</u>		Relinquished by: <u>[Signature]</u> Date/Time: <u>7-25-18 1010</u> Company: <u>APM</u>	
Custody Seals Intact: <u>Δ Yes Δ No</u> Custody Seal No.: <u>3.0°C (3.5°C)</u> Cooler Temperature(s) °C and Other Remarks: <u>4.0°C IR7</u>		Date/Time: <u>7-25-18 1010</u> Company: <u>JAL Pensacola</u>	



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOV#:		COC No: 400-73764-29084.2 Page: Page 2 of 2	
Sample Identification Sample Date: 7-24-18 Sample Time: 1459 Sample Date: 7-24-18 Sample Time: 1546 Matrix (W=water, S=solid, O=wastefoil, BT=tissue, A=Al) Water Water Water		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> <input type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> <input type="checkbox"/> 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP SM4500_Cl_E - Chloride, SM4500_So4_E - Sulfate, 4500_F_C - Fluoride, 2540C - TDS 6020_Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Te,Tl, 7470A -Hg	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/Note: Total Number of containers: 3 3	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/QC Requirements:	
Deliverable Requested: I, II, III, IV, Other (specify)		Method of Shipment:	
Empty Kit Relinquished by:		Date:	
Relinquished by: [Signature] Date/Time: 7-25-18 1010 Company: HSH EM		Received by: [Signature] Date/Time: 7-25-18 1010 Company: TIA Pensacola	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 3.0°C 3.5°C 4.0°C IR7	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156862-1

SDG Number: Ash Pond

Login Number: 156862

List Number: 1

Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0°C, 3.5°C, 4.0°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-156862-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

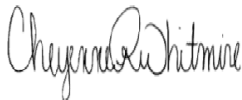
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

8/23/2018 5:45:56 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Job ID: 400-156862-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-156862-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-378516: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-156862-1), APMW-2 (400-156862-2), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-5 (400-156862-5), APMW-6 (400-156862-6), APMW-7 (400-156862-7), APMW-8 (400-156862-8), APMW-9 (400-156862-9), APMW-10 (400-156862-10), DUP-01 (400-156862-11), DUP-02 (400-156862-12) and FB-01 (400-156862-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-378516: Sample aliquots reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-1 (400-156862-1), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-7 (400-156862-7), APMW-8 (400-156862-8) and DUP-01 (400-156862-11)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-378516: The Ba carrier recovery (115%) is outside the upper control limit (110%) for the following sample: APMW-2 (400-156862-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference. A native barium result was applied to the sample (3.0 mg/L) which brought the recovery below the 110% limit. The barium recovery is now 105%.

RTM 8/9/2018

Method(s) PrecSep-21: Radium 226 Prep Batch 160-378225: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-156862-1), APMW-2 (400-156862-2), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-5 (400-156862-5), APMW-6 (400-156862-6), APMW-7 (400-156862-7), APMW-8 (400-156862-8), APMW-9 (400-156862-9), APMW-10 (400-156862-10), DUP-01 (400-156862-11), DUP-02 (400-156862-12) and FB-01 (400-156862-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-378225: Sample aliquots reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-1 (400-156862-1), APMW-3 (400-156862-3), APMW-4 (400-156862-4), APMW-7 (400-156862-7), APMW-8 (400-156862-8) and DUP-01 (400-156862-11)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-378225: The Ba carrier recovery (115%) is outside the upper control limit (110%) for the following sample: APMW-2 (400-156862-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference. A native barium result was applied to the sample (3.0 mg/L) which brought the recovery below the 110% limit. The barium recovery is now 105%. RTM 8/9/2018

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-156862-1	APMW-1	Water	07/24/18 09:23	07/25/18 10:10
400-156862-2	APMW-2	Water	07/24/18 10:42	07/25/18 10:10
400-156862-3	APMW-3	Water	07/24/18 11:40	07/25/18 10:10
400-156862-4	APMW-4	Water	07/24/18 14:38	07/25/18 10:10
400-156862-5	APMW-5	Water	07/24/18 15:59	07/25/18 10:10
400-156862-6	APMW-6	Water	07/24/18 17:39	07/25/18 10:10
400-156862-7	APMW-7	Water	07/24/18 18:58	07/25/18 10:10
400-156862-8	APMW-8	Water	07/23/18 17:15	07/25/18 10:10
400-156862-9	APMW-9	Water	07/23/18 15:45	07/25/18 10:10
400-156862-10	APMW-10	Water	07/23/18 13:47	07/25/18 10:10
400-156862-11	DUP-01	Water	07/23/18 16:15	07/25/18 10:10
400-156862-12	DUP-02	Water	07/24/18 14:59	07/25/18 10:10
400-156862-13	FB-01	Water	07/24/18 15:46	07/25/18 10:10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-156862-1

Date Collected: 07/24/18 09:23

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.87		0.309	0.403	1.00	0.108	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.37		0.477	0.569	1.00	0.454	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	90.1		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.24		0.568	0.697	5.00	0.454	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-156862-2

Date Collected: 07/24/18 10:42

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	12.5		0.549	1.25	1.00	0.0782	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.67		0.528	0.809	1.00	0.384	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	90.5		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	19.2		0.762	1.49	5.00	0.384	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-156862-3

Date Collected: 07/24/18 11:40

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.840		0.172	0.188	1.00	0.0986	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.38		0.651	0.876	1.00	0.543	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	85.6		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.22		0.673	0.896	5.00	0.543	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-156862-4

Date Collected: 07/24/18 14:38

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.37		0.212	0.245	1.00	0.117	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.64		0.407	0.434	1.00	0.522	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	91.2		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.01		0.459	0.498	5.00	0.522	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-156862-5

Date Collected: 07/24/18 15:59

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.797		0.146	0.163	1.00	0.0805	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.16		0.453	0.593	1.00	0.376	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	90.8		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.95		0.476	0.615	5.00	0.376	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-156862-6

Date Collected: 07/24/18 17:39

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.916		0.157	0.177	1.00	0.0718	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.02		0.361	0.406	1.00	0.395	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	87.1		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.94		0.394	0.443	5.00	0.395	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-156862-7

Date Collected: 07/24/18 18:58

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.58		0.296	0.376	1.00	0.0973	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.97		0.520	0.636	1.00	0.474	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	87.1		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.56		0.598	0.739	5.00	0.474	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-156862-8

Date Collected: 07/23/18 17:15

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.40		0.224	0.257	1.00	0.113	pCi/L	07/27/18 10:05	08/20/18 12:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					07/27/18 10:05	08/20/18 12:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.62		0.438	0.500	1.00	0.440	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	91.2		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.02		0.492	0.562	5.00	0.440	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-156862-9

Date Collected: 07/23/18 15:45

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.71		0.267	0.362	1.00	0.0749	pCi/L	07/27/18 10:05	08/20/18 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					07/27/18 10:05	08/20/18 12:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.11		0.426	0.569	1.00	0.308	pCi/L	07/27/18 15:42	08/07/18 12:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					07/27/18 15:42	08/07/18 12:38	1
Y Carrier	92.3		40 - 110					07/27/18 15:42	08/07/18 12:38	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.82		0.503	0.674	5.00	0.308	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-156862-10

Date Collected: 07/23/18 13:47

Matrix: Water

Date Received: 07/25/18 10:10

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.75		0.232	0.280	1.00	0.0932	pCi/L	07/27/18 10:05	08/20/18 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					07/27/18 10:05	08/20/18 12:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.74		0.339	0.375	1.00	0.379	pCi/L	07/27/18 15:42	08/07/18 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					07/27/18 15:42	08/07/18 12:39	1
Y Carrier	91.6		40 - 110					07/27/18 15:42	08/07/18 12:39	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.49		0.411	0.468	5.00	0.379	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 07/23/18 16:15
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.33		0.233	0.262	1.00	0.121	pCi/L	07/27/18 10:05	08/20/18 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/27/18 10:05	08/20/18 12:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.54		0.456	0.512	1.00	0.470	pCi/L	07/27/18 15:42	08/07/18 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/27/18 15:42	08/07/18 12:39	1
Y Carrier	85.2		40 - 110					07/27/18 15:42	08/07/18 12:39	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.87		0.512	0.575	5.00	0.470	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 07/24/18 14:59
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-12
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.728		0.152	0.165	1.00	0.0891	pCi/L	07/27/18 10:05	08/20/18 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					07/27/18 10:05	08/20/18 12:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.06		0.430	0.570	1.00	0.326	pCi/L	07/27/18 15:42	08/07/18 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					07/27/18 15:42	08/07/18 12:39	1
Y Carrier	88.6		40 - 110					07/27/18 15:42	08/07/18 12:39	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.79		0.456	0.593	5.00	0.326	pCi/L		08/23/18 00:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 07/24/18 15:46
Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-13
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.234		0.0976	0.0999	1.00	0.107	pCi/L	07/27/18 10:05	08/20/18 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/27/18 10:05	08/20/18 12:50	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0966	U	0.200	0.200	1.00	0.342	pCi/L	07/27/18 15:42	08/07/18 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/27/18 15:42	08/07/18 12:39	1
Y Carrier	87.9		40 - 110					07/27/18 15:42	08/07/18 12:39	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.331	U	0.223	0.224	5.00	0.342	pCi/L		08/23/18 00:46	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 07/24/18 09:23

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-2

Date Collected: 07/24/18 10:42

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-3

Date Collected: 07/24/18 11:40

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-4

Date Collected: 07/24/18 14:38

Date Received: 07/25/18 10:10

Lab Sample ID: 400-156862-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-156862-5

Date Collected: 07/24/18 15:59

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-156862-6

Date Collected: 07/24/18 17:39

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-156862-7

Date Collected: 07/24/18 18:58

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-156862-8

Date Collected: 07/23/18 17:15

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:54	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-156862-9

Date Collected: 07/23/18 15:45

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	384032	08/20/18 12:55	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:38	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-156862-10

Date Collected: 07/23/18 13:47

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	383785	08/20/18 12:50	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-156862-11

Date Collected: 07/23/18 16:15

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	383785	08/20/18 12:50	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-156862-12

Date Collected: 07/24/18 14:59

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	383785	08/20/18 12:50	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Client Sample ID: FB-01

Lab Sample ID: 400-156862-13

Date Collected: 07/24/18 15:46

Matrix: Water

Date Received: 07/25/18 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			378225	07/27/18 10:05	JLC	TAL SL
Total/NA	Analysis	9315		1	383785	08/20/18 12:50	CDR	TAL SL
Total/NA	Prep	PrecSep_0			378516	07/27/18 15:42	JLC	TAL SL
Total/NA	Analysis	9320		1	380911	08/07/18 12:39	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	384691	08/23/18 00:46	MAR	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Rad

Prep Batch: 378225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	PrecSep-21	
400-156862-2	APMW-2	Total/NA	Water	PrecSep-21	
400-156862-3	APMW-3	Total/NA	Water	PrecSep-21	
400-156862-4	APMW-4	Total/NA	Water	PrecSep-21	
400-156862-5	APMW-5	Total/NA	Water	PrecSep-21	
400-156862-6	APMW-6	Total/NA	Water	PrecSep-21	
400-156862-7	APMW-7	Total/NA	Water	PrecSep-21	
400-156862-8	APMW-8	Total/NA	Water	PrecSep-21	
400-156862-9	APMW-9	Total/NA	Water	PrecSep-21	
400-156862-10	APMW-10	Total/NA	Water	PrecSep-21	
400-156862-11	DUP-01	Total/NA	Water	PrecSep-21	
400-156862-12	DUP-02	Total/NA	Water	PrecSep-21	
400-156862-13	FB-01	Total/NA	Water	PrecSep-21	
MB 160-378225/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-378225/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-378225/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 378516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-156862-1	APMW-1	Total/NA	Water	PrecSep_0	
400-156862-2	APMW-2	Total/NA	Water	PrecSep_0	
400-156862-3	APMW-3	Total/NA	Water	PrecSep_0	
400-156862-4	APMW-4	Total/NA	Water	PrecSep_0	
400-156862-5	APMW-5	Total/NA	Water	PrecSep_0	
400-156862-6	APMW-6	Total/NA	Water	PrecSep_0	
400-156862-7	APMW-7	Total/NA	Water	PrecSep_0	
400-156862-8	APMW-8	Total/NA	Water	PrecSep_0	
400-156862-9	APMW-9	Total/NA	Water	PrecSep_0	
400-156862-10	APMW-10	Total/NA	Water	PrecSep_0	
400-156862-11	DUP-01	Total/NA	Water	PrecSep_0	
400-156862-12	DUP-02	Total/NA	Water	PrecSep_0	
400-156862-13	FB-01	Total/NA	Water	PrecSep_0	
MB 160-378516/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-378516/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-378516/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-378225/23-A
Matrix: Water
Analysis Batch: 383785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 378225

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1964		0.0860	0.0878	1.00	0.0875	pCi/L	07/27/18 10:05	08/20/18 12:51	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/27/18 10:05	08/20/18 12:51	1

Lab Sample ID: LCS 160-378225/1-A
Matrix: Water
Analysis Batch: 384032

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 378225

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.917		1.02	1.00	0.0624	pCi/L	87	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-378225/2-A
Matrix: Water
Analysis Batch: 384032

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 378225

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	10.97		1.12	1.00	0.0685	pCi/L	97	68 - 137	0.49	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	98.8		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-378516/23-A
Matrix: Water
Analysis Batch: 380757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 378516

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1533	U	0.191	0.191	1.00	0.316	pCi/L	07/27/18 15:42	08/07/18 12:40	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/27/18 15:42	08/07/18 12:40	1
Y Carrier	93.1		40 - 110					07/27/18 15:42	08/07/18 12:40	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
 SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-378516/1-A
Matrix: Water
Analysis Batch: 380911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 378516

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.1	11.88		1.29	1.00	0.327	pCi/L	107	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: LCSD 160-378516/2-A
Matrix: Water
Analysis Batch: 380911

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 378516

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	11.1	11.70		1.27	1.00	0.316	pCi/L	105	56 - 140	0.07	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	90.5		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-156777-A-1 DU
Matrix: Water
Analysis Batch: 384691

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.859		0.9245		0.296	5.00	0.381	pCi/L	0.11	

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): 400-73764-29084.1 Page: Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: 40009375 Project #: 40009375 SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Ca,Cd,Cr,Cu,Pb,LI,Mo,Se,TT, T470A -Hg 4500 - F, C - Fluoride, 2540C - TDS 5M4500 - Cl, E - Chloride, 5M4500 - SO4, F - Sulfate, 9315 - Ra226, 9320 - Ra228, Ra226Ra228 - GPPC	
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=wastefoli, BT=Tissue, A=Ab)		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
APMW-1 APMW-2 APMW-3 APMW-4 APMW-5 APMW-6 APMW-7 APMW-8 APMW-9 APMW-10 Dup-01		Total Number of containers Special Instructions/Note:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____			
Relinquished by: _____ Date/Time: 7-25-18 1010 Relinquished by: _____ Date/Time: 7-25-18 1010 Relinquished by: _____ Date/Time:		Received by: _____ Date/Time: 7-25-18 1010 Received by: _____ Date/Time: Received by: _____ Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 3.0°C (35.5°C) 4.0°C (IR7)	



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab P.M.: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 400-73764-29084.2 Page: Page 2 of 2	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOV#:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> <input type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> <input type="checkbox"/> 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SM4500_Cl_E - Chloride, SM4500_S04_E - Sulfate, 4500_F_C - Fluoride, 2540C - TDS 6020_Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,LI,Mo,Se,Te,Tl, 7470A -Hg			
Sample Identification Sample Date: 7-24-18 Sample Time: 1459 Sample Date: 7-24-18 Sample Time: 1546		Sample Type (C=Comp, G=grab) Preservation Code: G Matrix (W=water, S=solid, O=soil, BT=tissue, A=Al)		Total Number of Containers: 3 Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: [Signature] Date/Time: 7-25-18 1010 Company: HSH EM		Received by: [Signature] Date/Time: 7-25-18 1010 Company: TAL Pensacola			
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:			
Relinquished by:		Received by:			
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 3.0°C 3.5°C 4.0°C IR7			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156862-2

SDG Number: Ash Pond

Login Number: 156862

List Number: 1

Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0°C, 3.5°C, 4.0°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-156862-2

SDG Number: Ash Pond

Login Number: 156862

List Number: 2

Creator: Carter, Kevin M

List Source: TestAmerica St. Louis

List Creation: 07/26/18 05:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18
Kansas	NELAP	7	E-10236	10-31-18
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-156862-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-18 *
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18 *
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-18 *
West Virginia DEP	State Program	3	381	08-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-158670-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

9/28/2018 3:49:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Job ID: 400-158670-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-158670-1

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-158670-1), APMW-2 (400-158670-2), APMW-3 (400-158670-3), APMW-4 (400-158670-4), APMW-5 (400-158670-5), DUP-1 (400-158670-6), APMW-10 (400-158670-7), APMW-9 (400-158670-9), APMW-8 (400-158670-10), APMW-6 (400-158670-12) and DUP-2 (400-158670-13). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike (MS) recovery for preparation batch 410836 and analytical batch 410940 was outside control limit. Sample matrix interference and/or non-homogeneity was suspected because the associated laboratory control sample (LCS) recovery was within acceptance limit.

General Chemistry

Method(s) SM 2540C: Residue for the following sample was non-detect, but the crucible did not reach constant weight as dictated by the method. The sample was re-analyzed and confirmed the result, but the re-analysis was outside of the method hold time: FB-1 (400-158670-8).

Method(s) SM 4500 F C: The sample duplicate precision for the following sample associated with analytical batch 410702 was outside control limits: (400-158670-B-9 DU). The associated Laboratory Control Sample (LCS) met acceptance criteria.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-158670-1), APMW-2 (400-158670-2), APMW-3 (400-158670-3), APMW-4 (400-158670-4), APMW-5 (400-158670-5), DUP-1 (400-158670-6), APMW-10 (400-158670-7), APMW-9 (400-158670-9), APMW-8 (400-158670-10), APMW-7 (400-158670-11), APMW-6 (400-158670-12) and DUP-2 (400-158670-13). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 411826 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-3 (400-158670-3), APMW-4 (400-158670-4), APMW-5 (400-158670-5), DUP-1 (400-158670-6), APMW-10 (400-158670-7), APMW-9 (400-158670-9), APMW-8 (400-158670-10), APMW-7 (400-158670-11), APMW-6 (400-158670-12) and DUP-2 (400-158670-13). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-158670-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.71		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	3.6		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	240		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	770		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Chloride	1600		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	6.1		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.9				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-158670-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	2.9		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.022		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	4.0		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	390		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	6300		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.23				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-158670-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.099		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.12		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.088		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.050		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0010	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - DL	4.9		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	20000		500	340	mg/L	1		SM 2540C	Total/NA
Chloride	10000		800	560	mg/L	400		SM 4500 Cl- E	Total/NA
Fluoride	0.45		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-158670-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1200		200	56	mg/L	40		SM 4500 SO4 E	Total/NA
Field pH	6.74				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-158670-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.53		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0025		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0039		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.054		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0082	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	1.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	220		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4200		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.54		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.33				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-158670-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.22		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0024	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.045		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.081		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	6.2		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	360		2.5	1.3	mg/L	50		6020	Total Recoverable
Mercury	0.000093	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	16000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	8900		800	560	mg/L	400		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	980		200	56	mg/L	40		SM 4500 SO4 E	Total/NA
Field pH	6.38				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-158670-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: DUP-1 (Continued)

Lab Sample ID: 400-158670-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.25		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	71		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.11		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.00030		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	2700		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.80		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	290		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-158670-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.25		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	68		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.015		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.11		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.000085	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	2700		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.81		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	290		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.9				SU	1		Field Sampling	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-158670-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000094	J	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-158670-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.45		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0035	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-9 (Continued)

Lab Sample ID: 400-158670-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	6.5		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Mercury	0.00035		0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	6300		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3000		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.13				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-158670-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.082		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.22		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.099		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.15		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	21		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	510		10	5.0	mg/L	200		6020	Total Recoverable
Mercury	0.000077	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	7800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3600		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	690		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.66				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-158670-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.79		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	98		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00043	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0029	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - RA	1.1		0.050	0.021	mg/L	5		6020	Total Recoverable
Mercury	0.000090	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	7000		50	34	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-7 (Continued)

Lab Sample ID: 400-158670-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4000		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	53		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.29				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-158670-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.50		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00069	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00074	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.026		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	14		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	210		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.2		0.30	0.017	mg/L	100		6020	Total Recoverable
Mercury	0.000070	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	4500		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	370		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.91				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-158670-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.46		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0025	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0061	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	6.6		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Mercury	0.000087	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	5700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3100		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	260		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-158670-1	APMW-1	Water	09/01/18 08:59	09/04/18 08:03
400-158670-2	APMW-2	Water	09/01/18 09:51	09/04/18 08:03
400-158670-3	APMW-3	Water	09/01/18 11:05	09/04/18 08:03
400-158670-4	APMW-4	Water	09/01/18 11:05	09/04/18 08:03
400-158670-5	APMW-5	Water	09/01/18 12:30	09/04/18 08:03
400-158670-6	DUP-1	Water	09/01/18 10:46	09/04/18 08:03
400-158670-7	APMW-10	Water	09/01/18 11:46	09/04/18 08:03
400-158670-8	FB-1	Water	09/01/18 10:50	09/04/18 08:03
400-158670-9	APMW-9	Water	09/06/18 07:29	09/06/18 13:25
400-158670-10	APMW-8	Water	09/06/18 08:56	09/06/18 13:25
400-158670-11	APMW-7	Water	09/06/18 10:20	09/06/18 13:25
400-158670-12	APMW-6	Water	09/06/18 11:07	09/06/18 13:25
400-158670-13	DUP-2	Water	09/06/18 06:29	09/06/18 13:25

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-158670-1

Date Collected: 09/01/18 08:59

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 00:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 00:38	5
Barium	0.71		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 00:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 00:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 00:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 00:38	5
Lithium	0.010		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 00:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 00:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 00:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 00:38	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 15:28	50
Calcium	240		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 15:28	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	770		5.0	3.4	mg/L			09/07/18 18:06	1
Chloride	1600		180	130	mg/L			09/13/18 11:36	90
Fluoride	0.10		0.10	0.032	mg/L			09/07/18 12:59	1
Sulfate	6.1		5.0	1.4	mg/L			09/13/18 14:28	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.9				SU			09/01/18 08:59	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-158670-2

Date Collected: 09/01/18 09:51

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 00:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 00:42	5
Barium	2.9		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 00:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 00:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 00:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 00:42	5
Lithium	0.022		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 00:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 00:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 00:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 00:42	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.0		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 15:32	50
Calcium	390		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 15:32	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6300		50	34	mg/L			09/07/18 18:06	1
Chloride	2800		180	130	mg/L			09/13/18 11:36	90
Fluoride	0.080	J	0.10	0.032	mg/L			09/07/18 13:08	1
Sulfate	1.5	J	5.0	1.4	mg/L			09/13/18 14:28	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.23				SU			09/01/18 09:51	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-158670-3

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:05	5
Arsenic	0.099		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:05	5
Barium	0.12		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:05	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:05	5
Cobalt	0.0023	J	0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:05	5
Lithium	0.088		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:05	5
Molybdenum	0.050		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:05	5
Selenium	0.0010	J	0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:05	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.9		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 15:37	50
Calcium	320		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 15:37	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20000		500	340	mg/L			09/07/18 18:06	1
Chloride	10000		800	560	mg/L			09/13/18 12:12	400
Fluoride	0.45		0.10	0.032	mg/L			09/07/18 13:10	1
Sulfate	1200		200	56	mg/L			09/13/18 15:05	40

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.74				SU			09/01/18 11:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-158670-4

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:10	5
Arsenic	0.017		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:10	5
Barium	0.53		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:10	5
Chromium	0.0025		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:10	5
Cobalt	0.0039		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:10	5
Lithium	0.054		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:10	5
Molybdenum	0.0082	J	0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:10	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.25	0.11	mg/L		09/13/18 10:55	09/17/18 15:41	25
Calcium	220		1.3	0.63	mg/L		09/13/18 10:55	09/17/18 15:41	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7800		50	34	mg/L			09/07/18 18:06	1
Chloride	4200		180	130	mg/L			09/13/18 11:36	90
Fluoride	0.54		0.10	0.032	mg/L			09/07/18 13:13	1
Sulfate	300		150	42	mg/L			09/13/18 15:05	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.33				SU			09/01/18 11:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-158670-5

Date Collected: 09/01/18 12:30

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:14	5
Arsenic	0.22		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:14	5
Barium	0.10		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:14	5
Chromium	0.0024	J	0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:14	5
Lithium	0.045		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:14	5
Molybdenum	0.081		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:14	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.2		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 15:46	50
Calcium	360		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 15:46	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000093	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16000		50	34	mg/L			09/07/18 18:06	1
Chloride	8900		800	560	mg/L			09/13/18 12:12	400
Fluoride	0.10		0.10	0.032	mg/L			09/07/18 13:15	1
Sulfate	980		200	56	mg/L			09/13/18 15:05	40

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.38				SU			09/01/18 12:30	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 09/01/18 10:46
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:19	5
Arsenic	0.12		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:19	5
Barium	0.25		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:19	5
Calcium	71		0.25	0.13	mg/L		09/13/18 10:55	09/14/18 01:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:19	5
Lithium	0.013		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:19	5
Molybdenum	0.11		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:19	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		09/13/18 10:55	09/17/18 16:13	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00030		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2700		25	17	mg/L			09/07/18 18:06	1
Chloride	1400		180	130	mg/L			09/17/18 09:49	90
Fluoride	0.80		0.10	0.032	mg/L			09/07/18 13:17	1
Sulfate	290		150	42	mg/L			09/13/18 15:05	30

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-158670-7

Date Collected: 09/01/18 11:46

Matrix: Water

Date Received: 09/04/18 08:03

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:45	5
Arsenic	0.12		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:45	5
Barium	0.25		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:45	5
Calcium	68		0.25	0.13	mg/L		09/13/18 10:55	09/14/18 01:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:45	5
Lithium	0.015		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:45	5
Molybdenum	0.11		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:45	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		09/13/18 10:55	09/17/18 16:17	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000085	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2700		25	17	mg/L			09/07/18 18:06	1
Chloride	1400		180	130	mg/L			09/17/18 09:49	90
Fluoride	0.81		0.10	0.032	mg/L			09/07/18 13:21	1
Sulfate	290		150	42	mg/L			09/13/18 15:09	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.9				SU			09/01/18 11:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 09/01/18 10:50
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:50	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:50	5
Calcium	<0.13		0.25	0.13	mg/L		09/13/18 10:55	09/14/18 01:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:50	5
Lithium	<0.0011		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:50	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		09/13/18 10:55	09/17/18 16:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000094	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/07/18 18:06	1
Total Dissolved Solids	<3.4	H	5.0	3.4	mg/L			09/12/18 14:18	1
Chloride	<1.4		2.0	1.4	mg/L			09/17/18 09:08	1
Fluoride	<0.032		0.10	0.032	mg/L			09/07/18 13:25	1
Sulfate	<1.4		5.0	1.4	mg/L			09/13/18 14:28	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-158670-9

Date Collected: 09/06/18 07:29

Matrix: Water

Date Received: 09/06/18 13:25

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:54	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:54	5
Barium	0.45		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:54	5
Lithium	0.0035	J	0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:54	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.5		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 16:26	50
Calcium	310		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 16:26	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00035		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6300		50	34	mg/L			09/08/18 18:43	1
Chloride	3000		180	130	mg/L			09/17/18 09:52	90
Fluoride	0.060	J	0.10	0.032	mg/L			09/07/18 13:43	1
Sulfate	270		100	28	mg/L			09/17/18 14:37	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.13				SU			09/06/18 07:29	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-158670-10

Date Collected: 09/06/18 08:56

Matrix: Water

Date Received: 09/06/18 13:25

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 01:59	5
Arsenic	0.082		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 01:59	5
Barium	0.22		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 01:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 01:59	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 01:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 01:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 01:59	5
Lithium	0.099		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 01:59	5
Molybdenum	0.15		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 01:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 01:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 01:59	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	21		2.0	0.84	mg/L		09/13/18 10:55	09/17/18 16:31	200
Calcium	510		10	5.0	mg/L		09/13/18 10:55	09/17/18 16:31	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000077	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7800		50	34	mg/L			09/08/18 18:43	1
Chloride	3600		180	130	mg/L			09/17/18 09:52	90
Fluoride	1.1		0.10	0.032	mg/L			09/07/18 13:50	1
Sulfate	690		100	28	mg/L			09/17/18 14:37	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.66				SU			09/06/18 08:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-158670-11

Date Collected: 09/06/18 10:20

Matrix: Water

Date Received: 09/06/18 13:25

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 02:03	5
Arsenic	0.0013		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 02:03	5
Barium	0.79		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 02:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:03	5
Calcium	98		0.25	0.13	mg/L		09/13/18 10:55	09/14/18 02:03	5
Chromium	0.0017	J	0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 02:03	5
Cobalt	0.00043	J	0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 02:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 02:03	5
Lithium	0.0029	J	0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 02:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 02:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 02:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 02:03	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.050	0.021	mg/L		09/13/18 10:55	09/17/18 16:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000090	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7000		50	34	mg/L			09/08/18 18:43	1
Chloride	4000		180	130	mg/L			09/17/18 09:52	90
Fluoride	0.13		0.10	0.032	mg/L			09/07/18 13:53	1
Sulfate	53		25	7.0	mg/L			09/17/18 14:37	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.29				SU			09/06/18 10:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-158670-12

Date Collected: 09/06/18 11:07

Matrix: Water

Date Received: 09/06/18 13:25

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 02:08	5
Arsenic	0.50		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 02:08	5
Barium	0.24		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 02:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:08	5
Cadmium	0.00069	J	0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:08	5
Chromium	0.0033		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 02:08	5
Cobalt	0.00074	J	0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 02:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 02:08	5
Lithium	0.026		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 02:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 02:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 02:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14		1.0	0.42	mg/L		09/13/18 10:55	09/17/18 16:40	100
Calcium	210		5.0	2.5	mg/L		09/13/18 10:55	09/17/18 16:40	100
Molybdenum	1.2		0.30	0.017	mg/L		09/13/18 10:55	09/17/18 16:40	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4500		50	34	mg/L			09/08/18 18:43	1
Chloride	2300		180	130	mg/L			09/17/18 09:52	90
Fluoride	1.1		0.10	0.032	mg/L			09/07/18 13:55	1
Sulfate	370		100	28	mg/L			09/17/18 14:37	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.91				SU			09/06/18 11:07	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: DUP-2

Date Collected: 09/06/18 06:29

Date Received: 09/06/18 13:25

Lab Sample ID: 400-158670-13

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 02:12	5
Arsenic	0.0021		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 02:12	5
Barium	0.46		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 02:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 02:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 02:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 02:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 02:12	5
Lithium	0.0025	J	0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 02:12	5
Molybdenum	0.0061	J	0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 02:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 02:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 02:12	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.6		0.50	0.21	mg/L		09/13/18 10:55	09/17/18 16:45	50
Calcium	310		2.5	1.3	mg/L		09/13/18 10:55	09/17/18 16:45	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000087	J	0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5700		50	34	mg/L			09/08/18 18:43	1
Chloride	3100		180	130	mg/L			09/17/18 09:52	90
Fluoride	0.080	J	0.10	0.032	mg/L			09/07/18 13:57	1
Sulfate	260		100	28	mg/L			09/17/18 14:39	20

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H	Sample was prepped or analyzed beyond the specified holding time
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-1
Date Collected: 09/01/18 08:59
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 00:38	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 15:28	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:10	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411411	09/13/18 11:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 12:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	411450	09/13/18 14:28	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 08:59	CDH	TAL PEN

Client Sample ID: APMW-2
Date Collected: 09/01/18 09:51
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 00:42	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 15:32	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:18	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411411	09/13/18 11:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	411450	09/13/18 14:28	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 09:51	CDH	TAL PEN

Client Sample ID: APMW-3
Date Collected: 09/01/18 11:05
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:05	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 15:37	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:20	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		400	411411	09/13/18 12:12	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-158670-3

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:10	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	411450	09/13/18 15:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 11:05	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-158670-4

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	411858	09/17/18 15:41	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:22	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	411411	09/13/18 11:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:13	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	411450	09/13/18 15:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 11:05	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-158670-5

Date Collected: 09/01/18 12:30

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:14	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 15:46	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:24	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		400	411411	09/13/18 12:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:15	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	411450	09/13/18 15:05	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 12:30	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: DUP-1

Lab Sample ID: 400-158670-6

Date Collected: 09/01/18 10:46

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	411858	09/17/18 16:13	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:40	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	411450	09/13/18 15:05	RRC	TAL PEN

Client Sample ID: APMW-10

Lab Sample ID: 400-158670-7

Date Collected: 09/01/18 11:46

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:45	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	411858	09/17/18 16:17	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:42	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:21	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	411450	09/13/18 15:09	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/01/18 11:46	CDH	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-158670-8

Date Collected: 09/01/18 10:50

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	411858	09/17/18 16:22	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:44	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410750	09/07/18 18:06	DEK	TAL PEN
Total/NA	Analysis	SM 2540C		1	411265	09/12/18 14:18	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	411757	09/17/18 09:08	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-158670-8

Date Collected: 09/01/18 10:50

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:25	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	411450	09/13/18 14:28	RRC	TAL PEN

Client Sample ID: APMW-9

Lab Sample ID: 400-158670-9

Date Collected: 09/06/18 07:29

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 16:26	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:46	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410817	09/08/18 18:43	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	411826	09/17/18 14:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/06/18 07:29	CDH	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-158670-10

Date Collected: 09/06/18 08:56

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 01:59	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	411858	09/17/18 16:31	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:48	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410817	09/08/18 18:43	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	411826	09/17/18 14:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/06/18 08:56	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-158670-11

Date Collected: 09/06/18 10:20

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 02:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	411858	09/17/18 16:35	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:50	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410817	09/08/18 18:43	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	411826	09/17/18 14:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/06/18 10:20	CDH	TAL PEN

Client Sample ID: APMW-6

Lab Sample ID: 400-158670-12

Date Collected: 09/06/18 11:07

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 02:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	411858	09/17/18 16:40	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:52	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410817	09/08/18 18:43	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:52	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	411826	09/17/18 14:37	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	413010	09/06/18 11:07	CDH	TAL PEN

Client Sample ID: DUP-2

Lab Sample ID: 400-158670-13

Date Collected: 09/06/18 06:29

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	411740	09/14/18 02:12	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		411392	09/13/18 10:55	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	411858	09/17/18 16:45	DRE	TAL PEN
Total/NA	Prep	7470A			410836	09/09/18 14:37	DN1	TAL PEN
Total/NA	Analysis	7470A		1	410940	09/10/18 12:54	DN1	TAL PEN
Total/NA	Analysis	SM 2540C		1	410817	09/08/18 18:43	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	411757	09/17/18 09:52	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Client Sample ID: DUP-2

Lab Sample ID: 400-158670-13

Date Collected: 09/06/18 06:29

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	410702	09/07/18 13:57	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	411826	09/17/18 14:39	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Metals

Prep Batch: 410836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	7470A	
400-158670-2	APMW-2	Total/NA	Water	7470A	
400-158670-3	APMW-3	Total/NA	Water	7470A	
400-158670-4	APMW-4	Total/NA	Water	7470A	
400-158670-5	APMW-5	Total/NA	Water	7470A	
400-158670-6	DUP-1	Total/NA	Water	7470A	
400-158670-7	APMW-10	Total/NA	Water	7470A	
400-158670-8	FB-1	Total/NA	Water	7470A	
400-158670-9	APMW-9	Total/NA	Water	7470A	
400-158670-10	APMW-8	Total/NA	Water	7470A	
400-158670-11	APMW-7	Total/NA	Water	7470A	
400-158670-12	APMW-6	Total/NA	Water	7470A	
400-158670-13	DUP-2	Total/NA	Water	7470A	
MB 400-410836/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-410836/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-158670-1 MS	APMW-1	Total/NA	Water	7470A	
400-158670-1 MSD	APMW-1	Total/NA	Water	7470A	

Analysis Batch: 410940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	7470A	410836
400-158670-2	APMW-2	Total/NA	Water	7470A	410836
400-158670-3	APMW-3	Total/NA	Water	7470A	410836
400-158670-4	APMW-4	Total/NA	Water	7470A	410836
400-158670-5	APMW-5	Total/NA	Water	7470A	410836
400-158670-6	DUP-1	Total/NA	Water	7470A	410836
400-158670-7	APMW-10	Total/NA	Water	7470A	410836
400-158670-8	FB-1	Total/NA	Water	7470A	410836
400-158670-9	APMW-9	Total/NA	Water	7470A	410836
400-158670-10	APMW-8	Total/NA	Water	7470A	410836
400-158670-11	APMW-7	Total/NA	Water	7470A	410836
400-158670-12	APMW-6	Total/NA	Water	7470A	410836
400-158670-13	DUP-2	Total/NA	Water	7470A	410836
MB 400-410836/13-A	Method Blank	Total/NA	Water	7470A	410836
LCS 400-410836/14-A	Lab Control Sample	Total/NA	Water	7470A	410836
400-158670-1 MS	APMW-1	Total/NA	Water	7470A	410836
400-158670-1 MSD	APMW-1	Total/NA	Water	7470A	410836

Prep Batch: 411392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-158670-1	APMW-1	Total Recoverable	Water	3005A	
400-158670-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-158670-2	APMW-2	Total Recoverable	Water	3005A	
400-158670-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-158670-3	APMW-3	Total Recoverable	Water	3005A	
400-158670-4	APMW-4	Total Recoverable	Water	3005A	
400-158670-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-158670-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-158670-5	APMW-5	Total Recoverable	Water	3005A	
400-158670-6	DUP-1	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Metals (Continued)

Prep Batch: 411392 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-6 - DL	DUP-1	Total Recoverable	Water	3005A	
400-158670-7 - DL	APMW-10	Total Recoverable	Water	3005A	
400-158670-7	APMW-10	Total Recoverable	Water	3005A	
400-158670-8 - RA	FB-1	Total Recoverable	Water	3005A	
400-158670-8	FB-1	Total Recoverable	Water	3005A	
400-158670-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-158670-9	APMW-9	Total Recoverable	Water	3005A	
400-158670-10	APMW-8	Total Recoverable	Water	3005A	
400-158670-10 - DL	APMW-8	Total Recoverable	Water	3005A	
400-158670-11 - RA	APMW-7	Total Recoverable	Water	3005A	
400-158670-11	APMW-7	Total Recoverable	Water	3005A	
400-158670-12 - DL	APMW-6	Total Recoverable	Water	3005A	
400-158670-12	APMW-6	Total Recoverable	Water	3005A	
400-158670-13	DUP-2	Total Recoverable	Water	3005A	
400-158670-13 - DL	DUP-2	Total Recoverable	Water	3005A	
MB 400-411392/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-411392/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-158670-2 MS	APMW-2	Total Recoverable	Water	3005A	
400-158670-2 MSD	APMW-2	Total Recoverable	Water	3005A	

Analysis Batch: 411740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total Recoverable	Water	6020	411392
400-158670-2	APMW-2	Total Recoverable	Water	6020	411392
400-158670-3	APMW-3	Total Recoverable	Water	6020	411392
400-158670-4	APMW-4	Total Recoverable	Water	6020	411392
400-158670-5	APMW-5	Total Recoverable	Water	6020	411392
400-158670-6	DUP-1	Total Recoverable	Water	6020	411392
400-158670-7	APMW-10	Total Recoverable	Water	6020	411392
400-158670-8	FB-1	Total Recoverable	Water	6020	411392
400-158670-9	APMW-9	Total Recoverable	Water	6020	411392
400-158670-10	APMW-8	Total Recoverable	Water	6020	411392
400-158670-11	APMW-7	Total Recoverable	Water	6020	411392
400-158670-12	APMW-6	Total Recoverable	Water	6020	411392
400-158670-13	DUP-2	Total Recoverable	Water	6020	411392
MB 400-411392/1-A ^5	Method Blank	Total Recoverable	Water	6020	411392
LCS 400-411392/2-A	Lab Control Sample	Total Recoverable	Water	6020	411392
400-158670-2 MS	APMW-2	Total Recoverable	Water	6020	411392
400-158670-2 MSD	APMW-2	Total Recoverable	Water	6020	411392

Analysis Batch: 411858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1 - DL	APMW-1	Total Recoverable	Water	6020	411392
400-158670-2 - DL	APMW-2	Total Recoverable	Water	6020	411392
400-158670-3 - DL	APMW-3	Total Recoverable	Water	6020	411392
400-158670-4 - DL	APMW-4	Total Recoverable	Water	6020	411392
400-158670-5 - DL	APMW-5	Total Recoverable	Water	6020	411392
400-158670-6 - DL	DUP-1	Total Recoverable	Water	6020	411392
400-158670-7 - DL	APMW-10	Total Recoverable	Water	6020	411392
400-158670-8 - RA	FB-1	Total Recoverable	Water	6020	411392
400-158670-9 - DL	APMW-9	Total Recoverable	Water	6020	411392

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 411858 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-10 - DL	APMW-8	Total Recoverable	Water	6020	411392
400-158670-11 - RA	APMW-7	Total Recoverable	Water	6020	411392
400-158670-12 - DL	APMW-6	Total Recoverable	Water	6020	411392
400-158670-13 - DL	DUP-2	Total Recoverable	Water	6020	411392

General Chemistry

Analysis Batch: 410702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-158670-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-158670-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-158670-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-158670-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-158670-6	DUP-1	Total/NA	Water	SM 4500 F C	
400-158670-7	APMW-10	Total/NA	Water	SM 4500 F C	
400-158670-8	FB-1	Total/NA	Water	SM 4500 F C	
400-158670-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-158670-10	APMW-8	Total/NA	Water	SM 4500 F C	
400-158670-11	APMW-7	Total/NA	Water	SM 4500 F C	
400-158670-12	APMW-6	Total/NA	Water	SM 4500 F C	
400-158670-13	DUP-2	Total/NA	Water	SM 4500 F C	
MB 400-410702/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-410702/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-158670-1 MS	APMW-1	Total/NA	Water	SM 4500 F C	
400-158670-1 MSD	APMW-1	Total/NA	Water	SM 4500 F C	
400-158670-9 DU	APMW-9	Total/NA	Water	SM 4500 F C	

Analysis Batch: 410750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	SM 2540C	
400-158670-2	APMW-2	Total/NA	Water	SM 2540C	
400-158670-3	APMW-3	Total/NA	Water	SM 2540C	
400-158670-4	APMW-4	Total/NA	Water	SM 2540C	
400-158670-5	APMW-5	Total/NA	Water	SM 2540C	
400-158670-6	DUP-1	Total/NA	Water	SM 2540C	
400-158670-7	APMW-10	Total/NA	Water	SM 2540C	
400-158670-8	FB-1	Total/NA	Water	SM 2540C	
MB 400-410750/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-410750/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-158760-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-158760-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 410817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-9	APMW-9	Total/NA	Water	SM 2540C	
400-158670-10	APMW-8	Total/NA	Water	SM 2540C	
400-158670-11	APMW-7	Total/NA	Water	SM 2540C	
400-158670-12	APMW-6	Total/NA	Water	SM 2540C	
400-158670-13	DUP-2	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 410817 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-410817/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-410817/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-158803-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 411265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-8	FB-1	Total/NA	Water	SM 2540C	
MB 400-411265/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-411265/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-158868-E-3 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 411411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-158670-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-158670-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-158670-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-158670-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
MB 400-411411/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-411411/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-411411/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-158848-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-158848-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 411450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-158670-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-158670-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-158670-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-158670-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-158670-6	DUP-1	Total/NA	Water	SM 4500 SO4 E	
400-158670-7	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-158670-8	FB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-411450/17	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-411450/18	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-411450/14	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-158521-H-3 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-158521-H-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-158642-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-158642-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 411757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-6	DUP-1	Total/NA	Water	SM 4500 Cl- E	
400-158670-7	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-158670-8	FB-1	Total/NA	Water	SM 4500 Cl- E	
400-158670-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	
400-158670-10	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-158670-11	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-158670-12	APMW-6	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 411757 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-13	DUP-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-411757/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-411757/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-411757/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-158642-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-158642-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-158701-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-158701-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 411826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-158670-10	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-158670-11	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-158670-12	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-158670-13	DUP-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-411826/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-411826/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-411826/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-158703-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-158703-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 413010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	Field Sampling	
400-158670-2	APMW-2	Total/NA	Water	Field Sampling	
400-158670-3	APMW-3	Total/NA	Water	Field Sampling	
400-158670-4	APMW-4	Total/NA	Water	Field Sampling	
400-158670-5	APMW-5	Total/NA	Water	Field Sampling	
400-158670-7	APMW-10	Total/NA	Water	Field Sampling	
400-158670-9	APMW-9	Total/NA	Water	Field Sampling	
400-158670-10	APMW-8	Total/NA	Water	Field Sampling	
400-158670-11	APMW-7	Total/NA	Water	Field Sampling	
400-158670-12	APMW-6	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-411392/1-A ^5
Matrix: Water
Analysis Batch: 411740

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 411392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/13/18 10:55	09/14/18 00:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/13/18 10:55	09/14/18 00:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/13/18 10:55	09/14/18 00:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:07	5
Boron	<0.021		0.050	0.021	mg/L		09/13/18 10:55	09/14/18 00:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/13/18 10:55	09/14/18 00:07	5
Calcium	<0.13		0.25	0.13	mg/L		09/13/18 10:55	09/14/18 00:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/13/18 10:55	09/14/18 00:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/13/18 10:55	09/14/18 00:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/13/18 10:55	09/14/18 00:07	5
Lithium	<0.0011		0.0050	0.0011	mg/L		09/13/18 10:55	09/14/18 00:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/13/18 10:55	09/14/18 00:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/13/18 10:55	09/14/18 00:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/13/18 10:55	09/14/18 00:07	5

Lab Sample ID: LCS 400-411392/2-A
Matrix: Water
Analysis Batch: 411740

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 411392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0520		mg/L		104	80 - 120
Arsenic	0.0500	0.0509		mg/L		102	80 - 120
Barium	0.0500	0.0514		mg/L		103	80 - 120
Beryllium	0.0500	0.0491		mg/L		98	80 - 120
Boron	0.100	0.0954		mg/L		95	80 - 120
Cadmium	0.0500	0.0541		mg/L		108	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120
Chromium	0.0500	0.0515		mg/L		103	80 - 120
Cobalt	0.0500	0.0542		mg/L		108	80 - 120
Lead	0.0500	0.0529		mg/L		106	80 - 120
Lithium	0.0500	0.0536		mg/L		107	80 - 120
Molybdenum	0.0500	0.0511		mg/L		102	80 - 120
Selenium	0.0500	0.0512		mg/L		102	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

Lab Sample ID: 400-158670-2 MS
Matrix: Water
Analysis Batch: 411740

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 411392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125
Arsenic	<0.00046		0.0500	0.0533		mg/L		107	75 - 125
Barium	2.9		0.0500	2.90	4	mg/L		80	75 - 125
Beryllium	<0.00034		0.0500	0.0499		mg/L		100	75 - 125
Boron	4.2	E ^	0.100	4.36	E 4 ^	mg/L		212	75 - 125
Cadmium	<0.00034		0.0500	0.0525		mg/L		105	75 - 125
Calcium	350	E	5.00	360	E 4	mg/L		143	75 - 125
Chromium	<0.0011		0.0500	0.0531		mg/L		106	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-158670-2 MS
Matrix: Water
Analysis Batch: 411740

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 411392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	<0.00040		0.0500	0.0539		mg/L		108	75 - 125
Lead	<0.00035		0.0500	0.0512		mg/L		102	75 - 125
Lithium	0.022		0.0500	0.0813		mg/L		118	75 - 125
Molybdenum	<0.00085		0.0500	0.0504		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0522		mg/L		104	75 - 125
Thallium	<0.00085		0.0100	0.0103		mg/L		103	75 - 125

Lab Sample ID: 400-158670-2 MSD
Matrix: Water
Analysis Batch: 411740

Client Sample ID: APMW-2
Prep Type: Total Recoverable
Prep Batch: 411392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0518		mg/L		104	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0518		mg/L		104	75 - 125	3	20
Barium	2.9		0.0500	2.88	4	mg/L		55	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	0	20
Boron	4.2	E ^	0.100	4.36	E 4 ^	mg/L		213	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125	0	20
Calcium	350	E	5.00	352	E 4	mg/L		-20	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0516		mg/L		103	75 - 125	3	20
Cobalt	<0.00040		0.0500	0.0527		mg/L		105	75 - 125	2	20
Lead	<0.00035		0.0500	0.0505		mg/L		101	75 - 125	1	20
Lithium	0.022		0.0500	0.0798		mg/L		115	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0505		mg/L		101	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0504		mg/L		101	75 - 125	4	20
Thallium	<0.00085		0.0100	0.0101		mg/L		101	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-410836/13-A
Matrix: Water
Analysis Batch: 410940

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		09/09/18 14:37	09/10/18 12:38	1

Lab Sample ID: LCS 400-410836/14-A
Matrix: Water
Analysis Batch: 410940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		102	80 - 120

Lab Sample ID: 400-158670-1 MS
Matrix: Water
Analysis Batch: 410940

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 410836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070	F1	0.00201	0.00159	F1	mg/L		79	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Lab Sample ID: 400-158670-1 MSD
Matrix: Water
Analysis Batch: 410940

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 410836

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070	F1	0.00201	0.00163		mg/L		81	80 - 120	2	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-410750/1
Matrix: Water
Analysis Batch: 410750

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/07/18 18:06	1

Lab Sample ID: LCS 400-410750/2
Matrix: Water
Analysis Batch: 410750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	282		mg/L		96	78 - 122

Lab Sample ID: 400-158760-A-1 DU
Matrix: Water
Analysis Batch: 410750

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	180		180		mg/L		2	5

Lab Sample ID: 400-158760-B-2 DU
Matrix: Water
Analysis Batch: 410750

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	50		50.0		mg/L		0	5

Lab Sample ID: MB 400-410817/1
Matrix: Water
Analysis Batch: 410817

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/08/18 18:43	1

Lab Sample ID: LCS 400-410817/2
Matrix: Water
Analysis Batch: 410817

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

Lab Sample ID: 400-158803-A-1 DU
Matrix: Water
Analysis Batch: 410817

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	66		66.0		mg/L		0	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Lab Sample ID: MB 400-411265/1
Matrix: Water
Analysis Batch: 411265

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			09/12/18 14:18	1

Lab Sample ID: LCS 400-411265/2
Matrix: Water
Analysis Batch: 411265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	240		mg/L		82	78 - 122

Lab Sample ID: 400-158868-E-3 DU
Matrix: Water
Analysis Batch: 411265

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	220		222		mg/L		2	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-411411/6
Matrix: Water
Analysis Batch: 411411

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			09/13/18 10:06	1

Lab Sample ID: LCS 400-411411/7
Matrix: Water
Analysis Batch: 411411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.8		mg/L		106	90 - 110

Lab Sample ID: MRL 400-411411/3
Matrix: Water
Analysis Batch: 411411

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.83	J	mg/L		91	50 - 150

Lab Sample ID: 400-158848-A-1 MS
Matrix: Water
Analysis Batch: 411411

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.5	J	10.0	12.9		mg/L		113	73 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-158848-A-1 MSD
Matrix: Water
Analysis Batch: 411411

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.5	J	10.0	12.6		mg/L		111	73 - 120	2	8

Lab Sample ID: MB 400-411757/6
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			09/17/18 09:06	1

Lab Sample ID: LCS 400-411757/7
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.4		mg/L		108	90 - 110

Lab Sample ID: MRL 400-411757/3
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.16		mg/L		108	50 - 150

Lab Sample ID: 400-158642-F-1 MS
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.4		10.0	15.7		mg/L		113	73 - 120

Lab Sample ID: 400-158642-F-1 MSD
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.4		10.0	15.4		mg/L		111	73 - 120	1	8

Lab Sample ID: 400-158701-A-1 MS
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	21		10.0	31.1		mg/L		101	73 - 120

Lab Sample ID: 400-158701-A-1 MSD
Matrix: Water
Analysis Batch: 411757

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	21		10.0	31.3		mg/L		103	73 - 120	1	8

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-410702/3
Matrix: Water
Analysis Batch: 410702

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			09/07/18 12:44	1

Lab Sample ID: LCS 400-410702/4
Matrix: Water
Analysis Batch: 410702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.18		mg/L		105	90 - 110

Lab Sample ID: 400-158670-1 MS
Matrix: Water
Analysis Batch: 410702

Client Sample ID: APMW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.10		1.00	1.12		mg/L		102	75 - 125

Lab Sample ID: 400-158670-1 MSD
Matrix: Water
Analysis Batch: 410702

Client Sample ID: APMW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.10		1.00	1.12		mg/L		102	75 - 125	0	4

Lab Sample ID: 400-158670-9 DU
Matrix: Water
Analysis Batch: 410702

Client Sample ID: APMW-9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.060	J		0.0700	J F5	mg/L				15	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-411450/17
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			09/13/18 14:06	1

Lab Sample ID: LCS 400-411450/18
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.6		mg/L		97	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-411450/14
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.73	J	mg/L		95	50 - 150

Lab Sample ID: 400-158521-H-3 MS
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	9.49		mg/L		95	77 - 128

Lab Sample ID: 400-158521-H-3 MSD
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	9.42		mg/L		94	77 - 128	1	5

Lab Sample ID: 400-158642-F-1 MS
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	4.6	J	10.0	14.6		mg/L		100	77 - 128

Lab Sample ID: 400-158642-F-1 MSD
Matrix: Water
Analysis Batch: 411450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	4.6	J	10.0	14.8		mg/L		101	77 - 128	1	5

Lab Sample ID: MB 400-411826/6
Matrix: Water
Analysis Batch: 411826

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			09/17/18 14:12	1

Lab Sample ID: LCS 400-411826/7
Matrix: Water
Analysis Batch: 411826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.6		mg/L		97	90 - 110

Lab Sample ID: MRL 400-411826/3
Matrix: Water
Analysis Batch: 411826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	3.63	J	mg/L		73	50 - 150

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
 SDG: Ash Pond

Lab Sample ID: 400-158703-A-1 MS
Matrix: Water
Analysis Batch: 411826

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.1		10.0	16.6		mg/L		115	77 - 128

Lab Sample ID: 400-158703-A-1 MSD
Matrix: Water
Analysis Batch: 411826

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	5.1		10.0	16.5		mg/L		114	77 - 128	0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Chain of Custody Record

Client Information Mr. Cale Sellers Southern Company PO BOX 2641 GSC8 Birmingham AL 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: OCR - Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab #: Job #: C-458	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, T470A -Hg 4500 F C - Fluoride, 2540C - TDS SM4500 Cl E - Chloride, SM4500 SO4 E - Sulfate, 9315, Ra226, 9320, Ra228, Ra226Ra228, GFPC	
Sample Identification APMW-1 APMW-2 APMW-3 APMW-4 APMW-5 APMWS-1 APMWS-2 APMWS-3 APMWS-4 APMW-10 FB-1		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Total Number of Containers:	
Sample Date 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18		Sample Time 0859 0951 1105 1105 1230 1046 1050	
Sample Type (C=Comp, G=grab) G G G G G G G G G		Matrix (W=water, S=solid, O=wastical, BT=Tissue, A=Air) Water Water Water Water Water Water Water Water Water Water	
Preservation Code: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Special Instructions/Note: 400-158670 COC	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date/Time: 9/4/18 0803 Company: PDA Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____ Cooler Temperature(s) °C: 33.6, 21.0, 10.0 IR 8			



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL, 35291 Phone: 205-992-7762 (Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Phone: 850 380 3458 Bre # SWS25 Carrier Tracking No(s): 400-73764-29084.2 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS:10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 9315 Ra226, 9320 Ra228, Ra228Ra228_GFP Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 6020 -Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 470A-Hg 4500 F, C - Fluoride, 2540C - TDS SM4500 Cl ₂ - Chloride, SM4500 SO ₄ - Sulfate	
Sample Identification Sample Date: 9/6/18 Sample Time: 1046 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air): Water Preservation Code:		Total Number of Containers: <input checked="" type="checkbox"/> X Special Instructions/Note: Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Relinquished by: [Signature] Date/Time: 9/6/18 1325 Company: [Signature]		Relinquished by: [Signature] Date/Time: 9/6/18 1325 Company: JAPEN	
Relinquished by: [Signature] Date/Time: 9/6/18 1325 Company:		Relinquished by: [Signature] Date/Time: 9/6/18 1325 Company:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 1.6°C IKS	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-158670-1

SDG Number: Ash Pond

Login Number: 158670

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	No seal present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3°C, 2.1°C IR-8, 1.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-158670-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

10/10/2018 3:58:25 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Job ID: 400-158670-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-158670-2

RAD

Method(s) 9320: Ra-228 Prep Batch 160-387832. The following sample did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences (see prep NCM 160-148498). The sample was yellow, murky and contained sediment. The data have been reported with this narrative. (310-138284-C-5-B)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-387832: Sample aliquots 310-138284-5, 310-138284-5MS, and 310-138284MSD reduced due to potential matrix interference. Samples were yellow, murky, and contained sediment. Sample aliquots 400-158670-1, 400-158670-2, 400-158670-3, 400-158670-4, 400-158670-5, 400-158670-6, and 400-158760-7 reduced due to potential matrix interference. Sample were murky and had strong odors similar to that of sulfur. Sample aliquot 240-100756-1 reduced due to potential matrix interference. Sample contained floating white particulates and sediment. APMW-1 (400-158670-1), APMW-2 (400-158670-2), APMW-3 (400-158670-3), APMW-4 (400-158670-4), APMW-5 (400-158670-5), DUP-1 (400-158670-6) and APMW-10 (400-158670-7)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-388746: Sample aliquot 160-30650-2 reduced due to potential matrix interference. Sample was brown, opaque, contained heavy sediment levels, and had a strong odor. Sample aliquots 400-158670-10 and 400-158670-11 reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-8 (400-158670-10) and APMW-7 (400-158670-11)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-387810: Sample aliquots 310-138284-5, 310-138284-5MS, and 310-138284MSD reduced due to potential matrix interference. Samples were yellow, murky, and contained sediment. Sample aliquots 400-158670-1, 400-158670-2, 400-158670-3, 400-158670-4, 400-158670-5, 400-158670-6, and 400-158760-7 reduced due to potential matrix interference. Sample were murky and had strong odors similar to that of sulfur. Sample aliquot 240-100756-1 reduced due to potential matrix interference. Sample contained floating white particulates and sediment. APMW-1 (400-158670-1), APMW-2 (400-158670-2), APMW-3 (400-158670-3), APMW-4 (400-158670-4), APMW-5 (400-158670-5), DUP-1 (400-158670-6) and APMW-10 (400-158670-7)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-388647: Sample aliquot 160-30650-2 reduced due to potential matrix interference. Sample was brown, opaque, contained heavy sediment levels, and had a strong odor. Sample aliquots 400-158670-10 and 400-158670-11 reduced due to potential matrix interference. Samples were yellow and had strong odors similar to that of sulfur. APMW-8 (400-158670-10) and APMW-7 (400-158670-11)

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-158670-1	APMW-1	Water	09/01/18 08:59	09/04/18 08:03
400-158670-2	APMW-2	Water	09/01/18 09:51	09/04/18 08:03
400-158670-3	APMW-3	Water	09/01/18 11:05	09/04/18 08:03
400-158670-4	APMW-4	Water	09/01/18 11:05	09/04/18 08:03
400-158670-5	APMW-5	Water	09/01/18 12:30	09/04/18 08:03
400-158670-6	DUP-1	Water	09/01/18 10:46	09/04/18 08:03
400-158670-7	APMW-10	Water	09/01/18 11:46	09/04/18 08:03
400-158670-8	FB-1	Water	09/01/18 10:50	09/04/18 08:03
400-158670-9	APMW-9	Water	09/06/18 07:29	09/06/18 13:25
400-158670-10	APMW-8	Water	09/06/18 08:56	09/06/18 13:25
400-158670-11	APMW-7	Water	09/06/18 10:20	09/06/18 13:25
400-158670-12	APMW-6	Water	09/06/18 11:07	09/06/18 13:25
400-158670-13	DUP-2	Water	09/06/18 06:29	09/06/18 13:25

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-158670-1

Date Collected: 09/01/18 08:59

Matrix: Water

Date Received: 09/04/18 08:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.02		0.304	0.408	1.00	0.0884	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.36		0.476	0.568	1.00	0.449	pCi/L	09/07/18 13:17	09/18/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					09/07/18 13:17	09/18/18 09:53	1
Y Carrier	83.7		40 - 110					09/07/18 13:17	09/18/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.38		0.565	0.699	5.00	0.449	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-158670-2

Date Collected: 09/01/18 09:51

Matrix: Water

Date Received: 09/04/18 08:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	12.1		0.616	1.25	1.00	0.0829	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.42		0.526	0.725	1.00	0.388	pCi/L	09/07/18 13:17	09/18/18 09:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/07/18 13:17	09/18/18 09:54	1
Y Carrier	98.3		40 - 110					09/07/18 13:17	09/18/18 09:54	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	17.5		0.810	1.45	5.00	0.388	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-158670-3

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.687		0.163	0.174	1.00	0.0944	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.77		0.717	0.841	1.00	0.674	pCi/L	09/07/18 13:17	09/18/18 13:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					09/07/18 13:17	09/18/18 13:46	1
Y Carrier	83.0		40 - 110					09/07/18 13:17	09/18/18 13:46	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.46		0.735	0.859	5.00	0.674	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-158670-4

Date Collected: 09/01/18 11:05

Matrix: Water

Date Received: 09/04/18 08:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.03		0.181	0.204	1.00	0.0772	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.26		0.413	0.429	1.00	0.570	pCi/L	09/07/18 13:17	09/18/18 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/07/18 13:17	09/18/18 09:55	1
Y Carrier	80.4		40 - 110					09/07/18 13:17	09/18/18 09:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.30		0.451	0.475	5.00	0.570	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-158670-5

Date Collected: 09/01/18 12:30

Matrix: Water

Date Received: 09/04/18 08:03

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.710		0.169	0.180	1.00	0.0901	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.73		0.523	0.625	1.00	0.489	pCi/L	09/07/18 13:17	09/18/18 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/07/18 13:17	09/18/18 09:55	1
Y Carrier	85.2		40 - 110					09/07/18 13:17	09/18/18 09:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.44		0.550	0.650	5.00	0.489	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 09/01/18 10:46
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.38		0.223	0.255	1.00	0.0848	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.53		0.351	0.378	1.00	0.411	pCi/L	09/07/18 13:17	09/18/18 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/07/18 13:17	09/18/18 09:55	1
Y Carrier	91.6		40 - 110					09/07/18 13:17	09/18/18 09:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.91		0.416	0.456	5.00	0.411	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-10

Date Collected: 09/01/18 11:46

Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-7

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.59		0.237	0.277	1.00	0.104	pCi/L	09/07/18 11:46	10/02/18 05:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/07/18 11:46	10/02/18 05:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.55		0.384	0.410	1.00	0.457	pCi/L	09/07/18 13:17	09/18/18 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/07/18 13:17	09/18/18 09:55	1
Y Carrier	83.7		40 - 110					09/07/18 13:17	09/18/18 09:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.15		0.451	0.495	5.00	0.457	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 09/01/18 10:50
Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-8
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.0727	0.0745	1.00	0.0715	pCi/L	09/07/18 11:46	10/02/18 05:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/07/18 11:46	10/02/18 05:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.338		0.211	0.213	1.00	0.320	pCi/L	09/07/18 13:17	09/18/18 09:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/07/18 13:17	09/18/18 09:55	1
Y Carrier	85.6		40 - 110					09/07/18 13:17	09/18/18 09:55	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.517		0.223	0.226	5.00	0.320	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-158670-9

Date Collected: 09/06/18 07:29

Matrix: Water

Date Received: 09/06/18 13:25

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.66		0.279	0.368	1.00	0.0956	pCi/L	09/12/18 09:15	10/04/18 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					09/12/18 09:15	10/04/18 04:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.73		0.493	0.658	1.00	0.358	pCi/L	09/12/18 10:05	09/20/18 16:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					09/12/18 10:05	09/20/18 16:50	1
Y Carrier	83.7		40 - 110					09/12/18 10:05	09/20/18 16:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.40		0.566	0.754	5.00	0.358	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-158670-10

Date Collected: 09/06/18 08:56

Matrix: Water

Date Received: 09/06/18 13:25

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.04		0.203	0.224	1.00	0.127	pCi/L	09/12/18 09:15	10/04/18 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					09/12/18 09:15	10/04/18 04:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.82		0.473	0.539	1.00	0.492	pCi/L	09/12/18 10:05	09/20/18 16:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					09/12/18 10:05	09/20/18 16:50	1
Y Carrier	87.1		40 - 110					09/12/18 10:05	09/20/18 16:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.86		0.515	0.584	5.00	0.492	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-158670-11

Date Collected: 09/06/18 10:20

Matrix: Water

Date Received: 09/06/18 13:25

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.14		0.333	0.437	1.00	0.129	pCi/L	09/12/18 09:15	10/04/18 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/12/18 09:15	10/04/18 04:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.25		0.520	0.650	1.00	0.444	pCi/L	09/12/18 10:05	09/20/18 16:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/12/18 10:05	09/20/18 16:50	1
Y Carrier	86.7		40 - 110					09/12/18 10:05	09/20/18 16:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.39		0.617	0.783	5.00	0.444	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-158670-12

Date Collected: 09/06/18 11:07

Matrix: Water

Date Received: 09/06/18 13:25

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.933		0.166	0.186	1.00	0.0955	pCi/L	09/12/18 09:15	10/04/18 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/12/18 09:15	10/04/18 04:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.35		0.341	0.404	1.00	0.311	pCi/L	09/12/18 10:05	09/20/18 16:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					09/12/18 10:05	09/20/18 16:50	1
Y Carrier	88.6		40 - 110					09/12/18 10:05	09/20/18 16:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.28		0.379	0.445	5.00	0.311	pCi/L		10/05/18 00:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: DUP-2

Lab Sample ID: 400-158670-13

Date Collected: 09/06/18 06:29

Matrix: Water

Date Received: 09/06/18 13:25

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.66		0.278	0.367	1.00	0.0978	pCi/L	09/12/18 09:15	10/04/18 04:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/12/18 09:15	10/04/18 04:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.07		0.444	0.580	1.00	0.341	pCi/L	09/12/18 10:05	09/20/18 16:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/12/18 10:05	09/20/18 16:50	1
Y Carrier	84.1		40 - 110					09/12/18 10:05	09/20/18 16:50	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.73		0.524	0.686	5.00	0.341	pCi/L		10/05/18 00:01	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 09/01/18 08:59

Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390099	09/18/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-2

Date Collected: 09/01/18 09:51

Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:54	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-3

Date Collected: 09/01/18 11:05

Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 13:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-4

Date Collected: 09/01/18 11:05

Date Received: 09/04/18 08:03

Lab Sample ID: 400-158670-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-158670-5

Date Collected: 09/01/18 12:30

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-158670-6

Date Collected: 09/01/18 10:46

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-158670-7

Date Collected: 09/01/18 11:46

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392445	10/02/18 05:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-158670-8

Date Collected: 09/01/18 10:50

Matrix: Water

Date Received: 09/04/18 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			387810	09/07/18 11:46	JLC	TAL SL
Total/NA	Analysis	9315		1	392443	10/02/18 05:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			387832	09/07/18 13:17	JLC	TAL SL
Total/NA	Analysis	9320		1	390100	09/18/18 09:55	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-158670-9

Date Collected: 09/06/18 07:29

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			388647	09/12/18 09:15	JLC	TAL SL
Total/NA	Analysis	9315		1	392971	10/04/18 04:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			388746	09/12/18 10:05	JLC	TAL SL
Total/NA	Analysis	9320		1	390525	09/20/18 16:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-158670-10

Date Collected: 09/06/18 08:56

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			388647	09/12/18 09:15	JLC	TAL SL
Total/NA	Analysis	9315		1	392971	10/04/18 04:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			388746	09/12/18 10:05	JLC	TAL SL
Total/NA	Analysis	9320		1	390525	09/20/18 16:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-158670-11

Date Collected: 09/06/18 10:20

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			388647	09/12/18 09:15	JLC	TAL SL
Total/NA	Analysis	9315		1	392971	10/04/18 04:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			388746	09/12/18 10:05	JLC	TAL SL
Total/NA	Analysis	9320		1	390525	09/20/18 16:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-158670-12

Date Collected: 09/06/18 11:07

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			388647	09/12/18 09:15	JLC	TAL SL
Total/NA	Analysis	9315		1	392971	10/04/18 04:43	CDR	TAL SL
Total/NA	Prep	PrecSep_0			388746	09/12/18 10:05	JLC	TAL SL
Total/NA	Analysis	9320		1	390525	09/20/18 16:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Client Sample ID: DUP-2

Lab Sample ID: 400-158670-13

Date Collected: 09/06/18 06:29

Matrix: Water

Date Received: 09/06/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			388647	09/12/18 09:15	JLC	TAL SL
Total/NA	Analysis	9315		1	392971	10/04/18 04:44	CDR	TAL SL
Total/NA	Prep	PrecSep_0			388746	09/12/18 10:05	JLC	TAL SL
Total/NA	Analysis	9320		1	390525	09/20/18 16:50	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	393157	10/05/18 00:01	MAR	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Rad

Prep Batch: 387810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	PrecSep-21	
400-158670-2	APMW-2	Total/NA	Water	PrecSep-21	
400-158670-3	APMW-3	Total/NA	Water	PrecSep-21	
400-158670-4	APMW-4	Total/NA	Water	PrecSep-21	
400-158670-5	APMW-5	Total/NA	Water	PrecSep-21	
400-158670-6	DUP-1	Total/NA	Water	PrecSep-21	
400-158670-7	APMW-10	Total/NA	Water	PrecSep-21	
400-158670-8	FB-1	Total/NA	Water	PrecSep-21	
MB 160-387810/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-387810/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-138284-D-5-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
310-138284-D-5-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 387832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-1	APMW-1	Total/NA	Water	PrecSep_0	
400-158670-2	APMW-2	Total/NA	Water	PrecSep_0	
400-158670-3	APMW-3	Total/NA	Water	PrecSep_0	
400-158670-4	APMW-4	Total/NA	Water	PrecSep_0	
400-158670-5	APMW-5	Total/NA	Water	PrecSep_0	
400-158670-6	DUP-1	Total/NA	Water	PrecSep_0	
400-158670-7	APMW-10	Total/NA	Water	PrecSep_0	
400-158670-8	FB-1	Total/NA	Water	PrecSep_0	
MB 160-387832/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-387832/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-138284-D-5-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
310-138284-D-5-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 388647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-9	APMW-9	Total/NA	Water	PrecSep-21	
400-158670-10	APMW-8	Total/NA	Water	PrecSep-21	
400-158670-11	APMW-7	Total/NA	Water	PrecSep-21	
400-158670-12	APMW-6	Total/NA	Water	PrecSep-21	
400-158670-13	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-388647/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-388647/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
160-30650-A-1-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	
160-30650-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 388746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158670-9	APMW-9	Total/NA	Water	PrecSep_0	
400-158670-10	APMW-8	Total/NA	Water	PrecSep_0	
400-158670-11	APMW-7	Total/NA	Water	PrecSep_0	
400-158670-12	APMW-6	Total/NA	Water	PrecSep_0	
400-158670-13	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-388746/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-388746/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
160-30650-A-1-E MS	Matrix Spike	Total/NA	Water	PrecSep_0	
160-30650-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-387810/24-A
Matrix: Water
Analysis Batch: 392443

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 387810

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1902		0.0884	0.0901	1.00	0.0971	pCi/L	09/07/18 11:46	10/02/18 05:28	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					09/07/18 11:46	10/02/18 05:28	1

Lab Sample ID: LCS 160-387810/1-A
Matrix: Water
Analysis Batch: 392444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 387810

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	15.21		1.55	1.00	0.0964	pCi/L	100	68 - 137
Carrier	LCS LCS		Limits						
Ba Carrier	99.4		40 - 110						

Lab Sample ID: 310-138284-D-5-A MS
Matrix: Water
Analysis Batch: 392444

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 387810

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
						Uncert. (2σ+/-)					
Radium-226	0.587		15.1	13.42		1.38	1.00	0.102	pCi/L	85	75 - 138
Carrier	MS MS		Limits								
Ba Carrier	101		40 - 110								

Lab Sample ID: 310-138284-D-5-B MSD
Matrix: Water
Analysis Batch: 392444

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 387810

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
						Uncert. (2σ+/-)							
Radium-226	0.587		15.1	14.74		1.50	1.00	0.111	pCi/L	94	75 - 138	0.46	1
Carrier	MSD MSD		Limits										
Ba Carrier	100		40 - 110										

Lab Sample ID: MB 160-388647/22-A
Matrix: Water
Analysis Batch: 392971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 388647

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.2281		0.108	0.110	1.00	0.122	pCi/L	09/12/18 09:15	10/04/18 04:44	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-388647/22-A
Matrix: Water
Analysis Batch: 392971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 388647

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	102		40 - 110

Prepared	Analyzed	Dil Fac
09/12/18 09:15	10/04/18 04:44	1

Lab Sample ID: LCS 160-388647/1-A
Matrix: Water
Analysis Batch: 392965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 388647

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.1	15.94		1.61	1.00	0.113	pCi/L	105	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		40 - 110

Lab Sample ID: 160-30650-A-1-B MS
Matrix: Water
Analysis Batch: 392965

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 388647

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.194		15.1	14.78		1.52	1.00	0.134	pCi/L	96	75 - 138

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	95.3		40 - 110

Lab Sample ID: 160-30650-A-1-C MSD
Matrix: Water
Analysis Batch: 392965

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 388647

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.194		15.1	15.44		1.57	1.00	0.113	pCi/L	101	75 - 138	0.21	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	98.2		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-387832/24-A
Matrix: Water
Analysis Batch: 390101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 387832

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.2441	U	0.386	0.387	1.00	0.717	pCi/L	09/07/18 13:17	09/18/18 12:36	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-387832/24-A
Matrix: Water
Analysis Batch: 390101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 387832

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	110		40 - 110
Y Carrier	86.0		40 - 110

Prepared	Analyzed	Dil Fac
09/07/18 13:17	09/18/18 12:36	1
09/07/18 13:17	09/18/18 12:36	1

Lab Sample ID: LCS 160-387832/1-A
Matrix: Water
Analysis Batch: 390098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 387832

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	16.90		1.83	1.00	0.453	pCi/L	115	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	99.4		40 - 110
Y Carrier	85.6		40 - 110

Lab Sample ID: 310-138284-D-5-C MS
Matrix: Water
Analysis Batch: 390099

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 387832

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.644	U G	14.6	13.96		1.56	1.00	0.414	pCi/L	91	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	85.2		40 - 110

Lab Sample ID: 310-138284-D-5-D MSD
Matrix: Water
Analysis Batch: 390099

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 387832

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.644	U G	14.6	14.29		1.60	1.00	0.415	pCi/L	93	45 - 150	0.10	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	83.0		40 - 110

Lab Sample ID: MB 160-388746/22-A
Matrix: Water
Analysis Batch: 390525

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 388746

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06980	U	0.227	0.227	1.00	0.398	pCi/L	09/12/18 10:05	09/20/18 16:51	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-388746/22-A
Matrix: Water
Analysis Batch: 390525

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 388746

Carrier	MB %Yield	MB Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	85.6		40 - 110

Prepared	Analyzed	Dil Fac
09/12/18 10:05	09/20/18 16:51	1
09/12/18 10:05	09/20/18 16:51	1

Lab Sample ID: LCS 160-388746/1-A
Matrix: Water
Analysis Batch: 390511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 388746

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.6	15.85		1.74	1.00	0.479	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	84.5		40 - 110

Lab Sample ID: 160-30650-A-1-E MS
Matrix: Water
Analysis Batch: 390511

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 388746

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.222	U	14.6	15.08		1.68	1.00	0.493	pCi/L	102	45 - 150

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	95.3		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: 160-30650-A-1-F MSD
Matrix: Water
Analysis Batch: 390511

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 388746

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	0.222	U	14.6	15.99		1.75	1.00	0.465	pCi/L	108	45 - 150	0.27	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	98.2		40 - 110
Y Carrier	87.5		40 - 110

Chain of Custody Record

Client Information Mr. Cale Sellers Southern Company PO BOX 2641 GSC8 Birmingham AL 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: OCR - Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): Lab No: 400-73764-29084_1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, T470A -Hg 4500 F C - Fluoride, 2540C - TDS SM4500 Cl E - Chloride, SM4500 SO4 E - Sulfate, 9315, Ra226, 9320, Ra228, Ra226Ra228, GFPC	
Sample Identification APMW-1 APMW-2 APMW-3 APMW-4 APMW-5 APMWS-1 APMWS-2 APMWS-3 APMWS-4 APMW-10 FB-1		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> No Total Number of Containers:	
Sample Date 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18 9/1/18		Sample Time 0859 0951 1105 1105 1230 1046 1050	
Sample Type (C=Comp, G=grab) G G G G G G G G		Matrix (W=water, S=solid, O=wastical, BT=Tissue, A=Air) Water Water Water Water Water Water Water Water Water	
Preservation Code: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Special Instructions/Note: Dug-1 NO Sample		Special Instructions/Note: 400-158670 COC	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by:			
Relinquished by: [Signature] Date: 9/4/18		Relinquished by: Kathy R Owen Date: 09/04/18	
Relinquished by: [Signature] Date: 9/4/18		Relinquished by: [Signature] Date: 09/04/18	
Relinquished by: [Signature] Date: 9/4/18		Relinquished by: [Signature] Date: 09/04/18	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C: 33.6, 21.0, 10.0 IR 8	



Chain of Custody Record

Client Information		Lab. PM: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-73764-29084.2			
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 2			
Company: Southern Company		Job #: 400-158670 COC		Job #: 400-158670 COC			
Address: PO BOX 2641 GSC8		Due Date Requested:		Analysis Requested			
City: Birmingham		TAT Requested (days):		Total Number of Containers: X			
State, Zip: AL, 35291		PO #: SCS10347656		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Phone: 205-992-7762(Tel)		Project #: 40009375		Special Instructions/Note:			
Email: CBSSELLER@SOUTHERNCO.COM		SSOW#: Ash Pond		Special Instructions/Note:			
Project Name: CCR -Plant Watson		Site: Ash Pond		Special Instructions/Note:			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested
APMW-9 APMW-9	9/6/18	1046	G	Water	X	X	6020 -Sb,As,Ba,B,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 1740A-Hg
APMW-8	9/6/18	0729	G	Water	X	X	4500 F, C - Fluoride, 2540C - TDS
APMW-7		0850	G	Water	X	X	5M4500 Cl- Chloride, SM4500 SO4 E - Sulfate
APMW-6		1020	G	W	X	X	9315 Ra226, 9320 Ra228, Ra228Ra228 GFCP
Dup-2	9/6/18	0629	G	W	X	X	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological							
Deliverable Requested: I, II, III, IV, Other (specify)							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements:							
Relinquished by: [Signature]		Date: 9/6/18		Company: [Signature]		Time:	
Relinquished by: [Signature]		Date: 9/6/18		Company: [Signature]		Time: 1325	
Relinquished by: [Signature]		Date: 9/6/18		Company: [Signature]		Time: 1325	
Relinquished by: [Signature]		Date: 9/6/18		Company: [Signature]		Time: 1325	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.6°C IFS		Company: JAPEN	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-158670-2

SDG Number: Ash Pond

Login Number: 158670

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	No seal present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3°C, 2.1°C IR-8, 1.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-158670-2

SDG Number: Ash Pond

Login Number: 158670

List Number: 2

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 09/06/18 11:43 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	16.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-158670-2

SDG Number: Ash Pond

Login Number: 158670

List Number: 3

Creator: Dupart, Lacey S

List Source: TestAmerica St. Louis

List Creation: 09/08/18 03:44 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-158670-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	10-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-160036-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

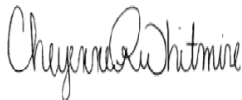
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

10/25/2018 6:32:38 PM

Cheyenne Whitmire, Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Job ID: 400-160036-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-160036-1

Metals

Method(s) 6020: The method blank for preparation batch 415241 and analytical batch 415414 contained Lithium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-160036-1), APMW-2 (400-160036-2), APMW-3 (400-160036-3), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-6 (400-160036-6), APMW-8 (400-160036-8), APMW-9 (400-160036-9), APMW-10 (400-160036-10), DUP-2 (400-160036-11) and DUP-1 (400-160036-12). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 415495 and analytical batch 415840 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

General Chemistry

Method(s) SM 2540C: The sample duplicate (DUP) precision for analytical batch 414174 was outside control limits. Sample non-homogeneity is suspected.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-160036-1), APMW-2 (400-160036-2), APMW-3 (400-160036-3), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-6 (400-160036-6), APMW-7 (400-160036-7), APMW-8 (400-160036-8), APMW-9 (400-160036-9), APMW-10 (400-160036-10), DUP-2 (400-160036-11) and DUP-1 (400-160036-12). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Do to the high concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-159679-B-1 MS) and (400-159679-B-1 MSD)

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-160036-1), APMW-3 (400-160036-3), APMW-4 (400-160036-4), (400-159679-B-1), (400-159679-B-1 MS) and (400-159679-B-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Do to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-159978-A-1 MS), (400-159978-A-1 MSD), (400-160048-O-2 MS) and (400-160048-O-2 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 415593 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-5 (400-160036-5), APMW-6 (400-160036-6), APMW-7 (400-160036-7), APMW-8 (400-160036-8), APMW-9 (400-160036-9), APMW-10 (400-160036-10), DUP-2 (400-160036-11), DUP-1 (400-160036-12), (400-159978-A-1), (400-159978-A-1 MS), (400-159978-A-1 MSD), (400-160048-O-2), (400-160048-O-2 MS) and (400-160048-O-2 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-160036-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00063	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.48		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.61		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium	0.0024	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Calcium - DL	270		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	3800		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	33		10	2.8	mg/L	2		SM 4500 SO4 E	Total/NA
Field pH	5.92				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-160036-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00094	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	4.0		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.026	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	4.0		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	380		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	6500		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		140	98	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Field pH	5.94				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-160036-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.077		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.091	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.061		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	5.0		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	360		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	20000		250	170	mg/L	1		SM 2540C	Total/NA
Chloride	11000		600	420	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.39		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1200		200	56	mg/L	40		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-160036-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.51				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-160036-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Chromium	0.0028		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0029		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.063	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0088	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Calcium - DL	210		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	8400		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4200		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.54		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.36				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-160036-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.21		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0015	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.052	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.070		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	6.5		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	17000		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	9300		600	420	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.090	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	960		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.47				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-160036-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-6 (Continued)

Lab Sample ID: 400-160036-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.49		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00077	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.00059	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.030	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	15		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	190		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.1		0.30	0.017	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4900		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2400		140	98	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	370		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.94				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-160036-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.93		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.95		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	93		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0021	J B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7400		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4000		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	34		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.28				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-160036-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.075		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.21		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.095	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.15		0.015	0.00085	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-8 (Continued)

Lab Sample ID: 400-160036-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	21		2.0	0.84	mg/L	200		6020	Total
Calcium - DL	470		10	5.0	mg/L	200		6020	Total
Total Dissolved Solids	8200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3800		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	650		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.63				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-160036-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.43		0.0025	0.00049	mg/L	5		6020	Total
Lithium	0.0040	J B	0.0050	0.0011	mg/L	5		6020	Total
Molybdenum	0.00090	J	0.015	0.00085	mg/L	5		6020	Total
Boron - DL	6.5		0.50	0.21	mg/L	50		6020	Total
Calcium - DL	290		2.5	1.3	mg/L	50		6020	Total
Total Dissolved Solids	6500		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3100		140	98	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	280		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.13				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-160036-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.11		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total
Calcium	71		0.25	0.13	mg/L	5		6020	Total
Lithium	0.017	B	0.0050	0.0011	mg/L	5		6020	Total
Molybdenum	0.10		0.015	0.00085	mg/L	5		6020	Total
Boron - DL	1.8		0.25	0.11	mg/L	25		6020	Total
Total Dissolved Solids	2900		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1400		140	98	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	0.78		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.77				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-2

Lab Sample ID: 400-160036-11

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: DUP-2 (Continued)

Lab Sample ID: 400-160036-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.11		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	72		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.018	B	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.099		0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	2900		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1300		140	98	mg/L	70		SM 4500 Cl- E	Total/NA
Fluoride	0.78		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-160036-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.066		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0086	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Calcium - DL	220		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7900		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	4100		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.54		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	310		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-160036-13

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160036-1	APMW-1	Water	10/01/18 10:31	10/03/18 15:40
400-160036-2	APMW-2	Water	10/01/18 11:55	10/03/18 15:40
400-160036-3	APMW-3	Water	10/01/18 12:54	10/03/18 15:40
400-160036-4	APMW-4	Water	10/01/18 13:56	10/03/18 15:40
400-160036-5	APMW-5	Water	10/02/18 16:11	10/03/18 15:40
400-160036-6	APMW-6	Water	10/02/18 15:15	10/03/18 15:40
400-160036-7	APMW-7	Water	10/02/18 14:20	10/03/18 15:40
400-160036-8	APMW-8	Water	10/02/18 12:25	10/03/18 15:40
400-160036-9	APMW-9	Water	10/02/18 11:25	10/03/18 15:40
400-160036-10	APMW-10	Water	10/02/18 10:31	10/03/18 15:40
400-160036-11	DUP-2	Water	10/02/18 09:31	10/03/18 15:40
400-160036-12	DUP-1	Water	10/01/18 12:56	10/03/18 15:40
400-160036-13	FB-1	Water	10/02/18 15:45	10/03/18 15:40



Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-160036-1

Date Collected: 10/01/18 10:31

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 16:55	5
Arsenic	0.00063	J	0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 16:55	5
Barium	0.48		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 16:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:55	5
Boron	0.61		0.050	0.021	mg/L		10/12/18 18:42	10/13/18 16:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 16:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 16:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 16:55	5
Lithium	0.0024	J B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 16:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 16:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 16:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 16:55	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270		2.5	1.3	mg/L		10/12/18 18:42	10/13/18 18:24	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3800		25	17	mg/L			10/04/18 17:11	1
Chloride	1400		160	110	mg/L			10/11/18 14:16	80
Fluoride	0.090	J	0.10	0.032	mg/L			10/12/18 15:50	1
Sulfate	33		10	2.8	mg/L			10/12/18 13:50	2

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.92				SU			10/01/18 10:31	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-2
Date Collected: 10/01/18 11:55
Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:00	5
Arsenic	0.00094	J	0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:00	5
Barium	4.0		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:00	5
Lithium	0.026	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:00	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.0		0.50	0.21	mg/L		10/12/18 18:42	10/13/18 18:29	50
Calcium	380		2.5	1.3	mg/L		10/12/18 18:42	10/13/18 18:29	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6500		50	34	mg/L			10/04/18 17:11	1
Chloride	2800		140	98	mg/L			10/15/18 10:59	70
Fluoride	0.070	J	0.10	0.032	mg/L			10/12/18 15:55	1
Sulfate	<1.4		5.0	1.4	mg/L			10/12/18 13:33	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.94				SU			10/01/18 11:55	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-160036-3

Date Collected: 10/01/18 12:54

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:04	5
Arsenic	0.077		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:04	5
Barium	0.10		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:04	5
Cobalt	0.0028		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:04	5
Lithium	0.091	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:04	5
Molybdenum	0.061		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:04	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.0		0.50	0.21	mg/L		10/12/18 18:42	10/13/18 18:33	50
Calcium	360		2.5	1.3	mg/L		10/12/18 18:42	10/13/18 18:33	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20000		250	170	mg/L			10/04/18 17:11	1
Chloride	11000		600	420	mg/L			10/15/18 12:40	300
Fluoride	0.39		0.10	0.032	mg/L			10/12/18 15:57	1
Sulfate	1200		200	56	mg/L			10/12/18 14:02	40

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.51				SU			10/01/18 12:54	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-160036-4

Date Collected: 10/01/18 13:56

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:08	5
Arsenic	0.017		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:08	5
Barium	0.50		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:08	5
Boron	1.7		0.050	0.021	mg/L		10/12/18 18:42	10/13/18 17:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:08	5
Chromium	0.0028		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:08	5
Cobalt	0.0029		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:08	5
Lithium	0.063	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:08	5
Molybdenum	0.0088	J	0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	210		1.3	0.63	mg/L		10/12/18 18:42	10/13/18 18:38	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8400		50	34	mg/L			10/04/18 17:11	1
Chloride	4200		200	140	mg/L			10/15/18 12:40	100
Fluoride	0.54		0.10	0.032	mg/L			10/12/18 15:59	1
Sulfate	330		100	28	mg/L			10/12/18 13:54	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.36				SU			10/01/18 13:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-160036-5

Date Collected: 10/02/18 16:11

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:13	5
Arsenic	0.21		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:13	5
Barium	0.10		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:13	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:13	5
Lithium	0.052	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:13	5
Molybdenum	0.070		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:13	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.5		0.50	0.21	mg/L		10/12/18 18:42	10/13/18 18:42	50
Calcium	310		2.5	1.3	mg/L		10/12/18 18:42	10/13/18 18:42	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	17000		130	85	mg/L			10/04/18 17:11	1
Chloride	9300		600	420	mg/L			10/15/18 12:40	300
Fluoride	0.090	J	0.10	0.032	mg/L			10/15/18 15:40	1
Sulfate	960		150	42	mg/L			10/16/18 09:54	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.47				SU			10/02/18 16:11	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-160036-6

Date Collected: 10/02/18 15:15

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:17	5
Arsenic	0.49		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:17	5
Barium	0.23		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:17	5
Cadmium	0.00077	J	0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:17	5
Cobalt	0.00059	J	0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:17	5
Lithium	0.030	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:17	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15		1.0	0.42	mg/L		10/12/18 18:42	10/13/18 18:47	100
Calcium	190		5.0	2.5	mg/L		10/12/18 18:42	10/13/18 18:47	100
Molybdenum	1.1		0.30	0.017	mg/L		10/12/18 18:42	10/13/18 18:47	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4900		50	34	mg/L			10/04/18 17:11	1
Chloride	2400		140	98	mg/L			10/15/18 11:02	70
Fluoride	1.0		0.10	0.032	mg/L			10/15/18 15:47	1
Sulfate	370		100	28	mg/L			10/16/18 09:54	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.94				SU			10/02/18 15:15	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-160036-7

Date Collected: 10/02/18 14:20

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 16:19	5
Arsenic	0.0014		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 16:19	5
Barium	0.93		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 16:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:19	5
Boron	0.95		0.050	0.021	mg/L		10/12/18 18:42	10/13/18 16:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:19	5
Calcium	93		0.25	0.13	mg/L		10/12/18 18:42	10/13/18 16:19	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 16:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 16:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 16:19	5
Lithium	0.0021	J B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 16:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 16:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 16:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 16:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7400		50	34	mg/L			10/04/18 17:11	1
Chloride	4000		200	140	mg/L			10/15/18 12:41	100
Fluoride	0.13		0.10	0.032	mg/L			10/15/18 15:49	1
Sulfate	34		25	7.0	mg/L			10/16/18 09:54	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.28				SU			10/02/18 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-160036-8

Date Collected: 10/02/18 12:25

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:22	5
Arsenic	0.075		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:22	5
Barium	0.21		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:22	5
Lithium	0.095	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:22	5
Molybdenum	0.15		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:22	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	21		2.0	0.84	mg/L		10/12/18 18:42	10/13/18 18:51	200
Calcium	470		10	5.0	mg/L		10/12/18 18:42	10/13/18 18:51	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8200		50	34	mg/L			10/04/18 17:11	1
Chloride	3800		200	140	mg/L			10/15/18 12:41	100
Fluoride	1.0		0.10	0.032	mg/L			10/15/18 15:51	1
Sulfate	650		150	42	mg/L			10/16/18 09:54	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.63				SU			10/02/18 12:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-160036-9

Date Collected: 10/02/18 11:25

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:27	5
Arsenic	0.0015		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:27	5
Barium	0.43		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:27	5
Lithium	0.0040	J B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:27	5
Molybdenum	0.00090	J	0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:27	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.5		0.50	0.21	mg/L		10/12/18 18:42	10/13/18 18:56	50
Calcium	290		2.5	1.3	mg/L		10/12/18 18:42	10/13/18 18:56	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6500		50	34	mg/L			10/04/18 17:11	1
Chloride	3100		140	98	mg/L			10/15/18 11:02	70
Fluoride	0.070	J	0.10	0.032	mg/L			10/15/18 15:54	1
Sulfate	280		100	28	mg/L			10/16/18 09:59	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.13				SU			10/02/18 11:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-160036-10

Date Collected: 10/02/18 10:31

Matrix: Water

Date Received: 10/03/18 15:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 17:53	5
Arsenic	0.11		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 17:53	5
Barium	0.23		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 17:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 17:53	5
Calcium	71		0.25	0.13	mg/L		10/12/18 18:42	10/13/18 17:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 17:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 17:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 17:53	5
Lithium	0.017	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 17:53	5
Molybdenum	0.10		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 17:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 17:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 17:53	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.25	0.11	mg/L		10/12/18 18:42	10/13/18 19:00	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2900		25	17	mg/L			10/04/18 17:11	1
Chloride	1400		140	98	mg/L			10/15/18 11:02	70
Fluoride	0.78		0.10	0.032	mg/L			10/15/18 15:56	1
Sulfate	300		100	28	mg/L			10/16/18 09:59	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.77				SU			10/02/18 10:31	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: DUP-2

Date Collected: 10/02/18 09:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-11

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 16:46	5
Arsenic	0.11		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 16:46	5
Barium	0.24		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 16:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 16:46	5
Calcium	72		0.25	0.13	mg/L		10/12/18 18:42	10/13/18 16:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 16:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 16:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 16:46	5
Lithium	0.018	B	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 16:46	5
Molybdenum	0.099		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 16:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 16:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 16:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		10/12/18 18:42	10/13/18 19:05	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2900		25	17	mg/L			10/04/18 17:11	1
Chloride	1300		140	98	mg/L			10/15/18 11:08	70
Fluoride	0.78		0.10	0.032	mg/L			10/15/18 15:58	1
Sulfate	300		100	28	mg/L			10/16/18 09:59	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: DUP-1

Date Collected: 10/01/18 12:56

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-12

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:46	10/13/18 16:50	5
Arsenic	0.017		0.0013	0.00046	mg/L		10/12/18 18:46	10/13/18 16:50	5
Barium	0.50		0.0025	0.00049	mg/L		10/12/18 18:46	10/13/18 16:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 16:50	5
Boron	1.7		0.050	0.021	mg/L		10/12/18 18:46	10/13/18 16:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 16:50	5
Chromium	0.0026		0.0025	0.0011	mg/L		10/12/18 18:46	10/13/18 16:50	5
Cobalt	0.0028		0.0025	0.00040	mg/L		10/12/18 18:46	10/13/18 16:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:46	10/13/18 16:50	5
Lithium	0.066		0.0050	0.0011	mg/L		10/12/18 18:46	10/13/18 16:50	5
Molybdenum	0.0086	J	0.015	0.00085	mg/L		10/12/18 18:46	10/13/18 16:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:46	10/13/18 16:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:46	10/13/18 16:50	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	220		1.3	0.63	mg/L		10/12/18 18:46	10/13/18 19:32	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7900		50	34	mg/L			10/04/18 17:11	1
Chloride	4100		200	140	mg/L			10/15/18 12:40	100
Fluoride	0.54		0.10	0.032	mg/L			10/12/18 16:02	1
Sulfate	310		100	28	mg/L			10/16/18 09:50	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: FB-1

Date Collected: 10/02/18 15:45

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-13

Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:46	10/13/18 19:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/12/18 18:46	10/13/18 19:50	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/12/18 18:46	10/13/18 19:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 19:50	5
Boron	<0.021		0.050	0.021	mg/L		10/12/18 18:46	10/13/18 19:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 19:50	5
Calcium	<0.13		0.25	0.13	mg/L		10/12/18 18:46	10/13/18 19:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:46	10/13/18 19:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:46	10/13/18 19:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:46	10/13/18 19:50	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/12/18 18:46	10/13/18 19:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:46	10/13/18 19:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:46	10/13/18 19:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:46	10/13/18 19:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:15	10/17/18 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/04/18 17:11	1
Chloride	<1.4		2.0	1.4	mg/L			10/15/18 10:44	1
Fluoride	<0.032		0.10	0.032	mg/L			10/15/18 16:02	1
Sulfate	<1.4		5.0	1.4	mg/L			10/16/18 09:16	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 10/01/18 10:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 16:55	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	415414	10/13/18 18:24	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 13:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	415025	10/11/18 14:16	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415221	10/12/18 15:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		2	415203	10/12/18 13:50	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/01/18 10:31	CDH	TAL PEN

Client Sample ID: APMW-2

Date Collected: 10/01/18 11:55

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	415414	10/13/18 18:29	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	415457	10/15/18 10:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415221	10/12/18 15:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	415203	10/12/18 13:33	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/01/18 11:55	CDH	TAL PEN

Client Sample ID: APMW-3

Date Collected: 10/01/18 12:54

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	415414	10/13/18 18:33	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	415457	10/15/18 12:40	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-160036-3

Date Collected: 10/01/18 12:54

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	415221	10/12/18 15:57	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		40	415203	10/12/18 14:02	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/01/18 12:54	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-160036-4

Date Collected: 10/01/18 13:56

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	415414	10/13/18 18:38	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 13:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		100	415457	10/15/18 12:40	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415221	10/12/18 15:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415203	10/12/18 13:54	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/01/18 13:56	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-160036-5

Date Collected: 10/02/18 16:11

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	415414	10/13/18 18:42	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 13:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		300	415457	10/15/18 12:40	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:40	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	415593	10/16/18 09:54	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 16:11	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-160036-6

Date Collected: 10/02/18 15:15

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:17	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	415414	10/13/18 18:47	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	415457	10/15/18 11:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415593	10/16/18 09:54	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 15:15	CDH	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-160036-7

Date Collected: 10/02/18 14:20

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 16:19	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	415457	10/15/18 12:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:49	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	415593	10/16/18 09:54	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 14:20	CDH	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-160036-8

Date Collected: 10/02/18 12:25

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:22	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	415414	10/13/18 18:51	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	415457	10/15/18 12:41	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:51	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	415593	10/16/18 09:54	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: APMW-8

Date Collected: 10/02/18 12:25

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 12:25	CDH	TAL PEN

Client Sample ID: APMW-9

Date Collected: 10/02/18 11:25

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:27	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	415414	10/13/18 18:56	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	415457	10/15/18 11:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415593	10/16/18 09:59	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 11:25	CDH	TAL PEN

Client Sample ID: APMW-10

Date Collected: 10/02/18 10:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 17:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	415414	10/13/18 19:00	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	415457	10/15/18 11:02	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:56	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415593	10/16/18 09:59	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	416638	10/02/18 10:31	CDH	TAL PEN

Client Sample ID: DUP-2

Date Collected: 10/02/18 09:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415241	10/12/18 18:42	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Client Sample ID: DUP-2

Date Collected: 10/02/18 09:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	415414	10/13/18 16:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415241	10/12/18 18:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	415414	10/13/18 19:05	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		70	415457	10/15/18 11:08	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 15:58	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415593	10/16/18 09:59	RRC	TAL PEN

Client Sample ID: DUP-1

Date Collected: 10/01/18 12:56

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415242	10/12/18 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 16:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		415242	10/12/18 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	415414	10/13/18 19:32	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	415457	10/15/18 12:40	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415221	10/12/18 16:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	415593	10/16/18 09:50	RRC	TAL PEN

Client Sample ID: FB-1

Date Collected: 10/02/18 15:45

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			415242	10/12/18 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	415414	10/13/18 19:50	DRE	TAL PEN
Total/NA	Prep	7470A			415495	10/15/18 15:15	DRE	TAL PEN
Total/NA	Analysis	7470A		1	415840	10/17/18 14:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	414174	10/04/18 17:11	DEK	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	415457	10/15/18 10:44	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	415510	10/15/18 16:02	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	415593	10/16/18 09:16	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Metals

Prep Batch: 415241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total Recoverable	Water	3005A	
400-160036-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-160036-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-160036-2	APMW-2	Total Recoverable	Water	3005A	
400-160036-3	APMW-3	Total Recoverable	Water	3005A	
400-160036-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-160036-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-160036-4	APMW-4	Total Recoverable	Water	3005A	
400-160036-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-160036-5	APMW-5	Total Recoverable	Water	3005A	
400-160036-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-160036-6	APMW-6	Total Recoverable	Water	3005A	
400-160036-7	APMW-7	Total Recoverable	Water	3005A	
400-160036-8	APMW-8	Total Recoverable	Water	3005A	
400-160036-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-160036-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-160036-9	APMW-9	Total Recoverable	Water	3005A	
400-160036-10	APMW-10	Total Recoverable	Water	3005A	
400-160036-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-160036-11	DUP-2	Total Recoverable	Water	3005A	
400-160036-11 - DL	DUP-2	Total Recoverable	Water	3005A	
MB 400-415241/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-415241/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-159944-J-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-159944-J-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 415242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-12	DUP-1	Total Recoverable	Water	3005A	
400-160036-12 - DL	DUP-1	Total Recoverable	Water	3005A	
400-160036-13	FB-1	Total Recoverable	Water	3005A	
MB 400-415242/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-415242/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-159951-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-159951-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 415414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total Recoverable	Water	6020	415241
400-160036-1 - DL	APMW-1	Total Recoverable	Water	6020	415241
400-160036-2	APMW-2	Total Recoverable	Water	6020	415241
400-160036-2 - DL	APMW-2	Total Recoverable	Water	6020	415241
400-160036-3	APMW-3	Total Recoverable	Water	6020	415241
400-160036-3 - DL	APMW-3	Total Recoverable	Water	6020	415241
400-160036-4	APMW-4	Total Recoverable	Water	6020	415241
400-160036-4 - DL	APMW-4	Total Recoverable	Water	6020	415241
400-160036-5	APMW-5	Total Recoverable	Water	6020	415241
400-160036-5 - DL	APMW-5	Total Recoverable	Water	6020	415241
400-160036-6	APMW-6	Total Recoverable	Water	6020	415241
400-160036-6 - DL	APMW-6	Total Recoverable	Water	6020	415241
400-160036-7	APMW-7	Total Recoverable	Water	6020	415241

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 415414 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-8	APMW-8	Total Recoverable	Water	6020	415241
400-160036-8 - DL	APMW-8	Total Recoverable	Water	6020	415241
400-160036-9	APMW-9	Total Recoverable	Water	6020	415241
400-160036-9 - DL	APMW-9	Total Recoverable	Water	6020	415241
400-160036-10	APMW-10	Total Recoverable	Water	6020	415241
400-160036-10 - DL	APMW-10	Total Recoverable	Water	6020	415241
400-160036-11	DUP-2	Total Recoverable	Water	6020	415241
400-160036-11 - DL	DUP-2	Total Recoverable	Water	6020	415241
400-160036-12	DUP-1	Total Recoverable	Water	6020	415242
400-160036-12 - DL	DUP-1	Total Recoverable	Water	6020	415242
400-160036-13	FB-1	Total Recoverable	Water	6020	415242
MB 400-415241/1-A ^5	Method Blank	Total Recoverable	Water	6020	415241
MB 400-415242/1-A ^5	Method Blank	Total Recoverable	Water	6020	415242
LCS 400-415241/2-A	Lab Control Sample	Total Recoverable	Water	6020	415241
LCS 400-415242/2-A	Lab Control Sample	Total Recoverable	Water	6020	415242
400-159944-J-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	415241
400-159944-J-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	415241
400-159951-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	415242
400-159951-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	415242

Prep Batch: 415495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	7470A	
400-160036-2	APMW-2	Total/NA	Water	7470A	
400-160036-3	APMW-3	Total/NA	Water	7470A	
400-160036-4	APMW-4	Total/NA	Water	7470A	
400-160036-5	APMW-5	Total/NA	Water	7470A	
400-160036-6	APMW-6	Total/NA	Water	7470A	
400-160036-7	APMW-7	Total/NA	Water	7470A	
400-160036-8	APMW-8	Total/NA	Water	7470A	
400-160036-9	APMW-9	Total/NA	Water	7470A	
400-160036-10	APMW-10	Total/NA	Water	7470A	
400-160036-11	DUP-2	Total/NA	Water	7470A	
400-160036-12	DUP-1	Total/NA	Water	7470A	
400-160036-13	FB-1	Total/NA	Water	7470A	
MB 400-415495/13-A	Method Blank	Total/NA	Water	7470A	
LCS 400-415495/14-A	Lab Control Sample	Total/NA	Water	7470A	
400-160036-1 MS	APMW-1	Total/NA	Water	7470A	
400-160036-1 MSD	APMW-1	Total/NA	Water	7470A	

Analysis Batch: 415840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	7470A	415495
400-160036-2	APMW-2	Total/NA	Water	7470A	415495
400-160036-3	APMW-3	Total/NA	Water	7470A	415495
400-160036-4	APMW-4	Total/NA	Water	7470A	415495
400-160036-5	APMW-5	Total/NA	Water	7470A	415495
400-160036-6	APMW-6	Total/NA	Water	7470A	415495
400-160036-7	APMW-7	Total/NA	Water	7470A	415495
400-160036-8	APMW-8	Total/NA	Water	7470A	415495
400-160036-9	APMW-9	Total/NA	Water	7470A	415495

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 415840 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-10	APMW-10	Total/NA	Water	7470A	415495
400-160036-11	DUP-2	Total/NA	Water	7470A	415495
400-160036-12	DUP-1	Total/NA	Water	7470A	415495
400-160036-13	FB-1	Total/NA	Water	7470A	415495
MB 400-415495/13-A	Method Blank	Total/NA	Water	7470A	415495
LCS 400-415495/14-A	Lab Control Sample	Total/NA	Water	7470A	415495
400-160036-1 MS	APMW-1	Total/NA	Water	7470A	415495
400-160036-1 MSD	APMW-1	Total/NA	Water	7470A	415495

General Chemistry

Analysis Batch: 414174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	SM 2540C	
400-160036-2	APMW-2	Total/NA	Water	SM 2540C	
400-160036-3	APMW-3	Total/NA	Water	SM 2540C	
400-160036-4	APMW-4	Total/NA	Water	SM 2540C	
400-160036-5	APMW-5	Total/NA	Water	SM 2540C	
400-160036-6	APMW-6	Total/NA	Water	SM 2540C	
400-160036-7	APMW-7	Total/NA	Water	SM 2540C	
400-160036-8	APMW-8	Total/NA	Water	SM 2540C	
400-160036-9	APMW-9	Total/NA	Water	SM 2540C	
400-160036-10	APMW-10	Total/NA	Water	SM 2540C	
400-160036-11	DUP-2	Total/NA	Water	SM 2540C	
400-160036-12	DUP-1	Total/NA	Water	SM 2540C	
400-160036-13	FB-1	Total/NA	Water	SM 2540C	
MB 400-414174/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-414174/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-159944-G-1 DU	Duplicate	Total/NA	Water	SM 2540C	
400-159944-G-6 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 415025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
MB 400-415025/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-415025/50	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-415025/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-160209-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-160209-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 415203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-160036-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-160036-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-160036-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
MB 400-415203/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-415203/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-415203/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-159933-G-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 415203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-159933-G-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 415221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-160036-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-160036-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-160036-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-160036-12	DUP-1	Total/NA	Water	SM 4500 F C	
MB 400-415221/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-415221/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160114-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-160114-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-160036-1 DU	APMW-1	Total/NA	Water	SM 4500 F C	

Analysis Batch: 415457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-2	APMW-2	Total/NA	Water	SM 4500 CI- E	
400-160036-3	APMW-3	Total/NA	Water	SM 4500 CI- E	
400-160036-4	APMW-4	Total/NA	Water	SM 4500 CI- E	
400-160036-5	APMW-5	Total/NA	Water	SM 4500 CI- E	
400-160036-6	APMW-6	Total/NA	Water	SM 4500 CI- E	
400-160036-7	APMW-7	Total/NA	Water	SM 4500 CI- E	
400-160036-8	APMW-8	Total/NA	Water	SM 4500 CI- E	
400-160036-9	APMW-9	Total/NA	Water	SM 4500 CI- E	
400-160036-10	APMW-10	Total/NA	Water	SM 4500 CI- E	
400-160036-11	DUP-2	Total/NA	Water	SM 4500 CI- E	
400-160036-12	DUP-1	Total/NA	Water	SM 4500 CI- E	
400-160036-13	FB-1	Total/NA	Water	SM 4500 CI- E	
MB 400-415457/6	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 400-415457/7	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
MRL 400-415457/3	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	
400-160037-C-11 MS	Matrix Spike	Total/NA	Water	SM 4500 CI- E	
400-160037-C-11 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 415510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-160036-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-160036-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-160036-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-160036-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-160036-10	APMW-10	Total/NA	Water	SM 4500 F C	
400-160036-11	DUP-2	Total/NA	Water	SM 4500 F C	
400-160036-13	FB-1	Total/NA	Water	SM 4500 F C	
MB 400-415510/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-415510/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-160036-5 MS	APMW-5	Total/NA	Water	SM 4500 F C	
400-160036-5 MSD	APMW-5	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 415593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-160036-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-160036-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-160036-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-160036-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-160036-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-160036-11	DUP-2	Total/NA	Water	SM 4500 SO4 E	
400-160036-12	DUP-1	Total/NA	Water	SM 4500 SO4 E	
400-160036-13	FB-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-415593/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-415593/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-415593/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-159978-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-159978-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-160048-O-2 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-160048-O-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 416638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	Field Sampling	
400-160036-2	APMW-2	Total/NA	Water	Field Sampling	
400-160036-3	APMW-3	Total/NA	Water	Field Sampling	
400-160036-4	APMW-4	Total/NA	Water	Field Sampling	
400-160036-5	APMW-5	Total/NA	Water	Field Sampling	
400-160036-6	APMW-6	Total/NA	Water	Field Sampling	
400-160036-7	APMW-7	Total/NA	Water	Field Sampling	
400-160036-8	APMW-8	Total/NA	Water	Field Sampling	
400-160036-9	APMW-9	Total/NA	Water	Field Sampling	
400-160036-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-415241/1-A ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 415241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:42	10/13/18 14:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/12/18 18:42	10/13/18 14:44	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/12/18 18:42	10/13/18 14:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 14:44	5
Boron	<0.021		0.050	0.021	mg/L		10/12/18 18:42	10/13/18 14:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:42	10/13/18 14:44	5
Calcium	<0.13		0.25	0.13	mg/L		10/12/18 18:42	10/13/18 14:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:42	10/13/18 14:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:42	10/13/18 14:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:42	10/13/18 14:44	5
Lithium	0.00179	J	0.0050	0.0011	mg/L		10/12/18 18:42	10/13/18 14:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:42	10/13/18 14:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:42	10/13/18 14:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:42	10/13/18 14:44	5

Lab Sample ID: LCS 400-415241/2-A
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0537		mg/L		107	80 - 120
Arsenic	0.0500	0.0502		mg/L		100	80 - 120
Barium	0.0500	0.0536		mg/L		107	80 - 120
Beryllium	0.0500	0.0519		mg/L		104	80 - 120
Boron	0.100	0.108		mg/L		108	80 - 120
Cadmium	0.0500	0.0504		mg/L		101	80 - 120
Calcium	5.00	5.33		mg/L		107	80 - 120
Chromium	0.0500	0.0512		mg/L		102	80 - 120
Cobalt	0.0500	0.0523		mg/L		105	80 - 120
Lead	0.0500	0.0519		mg/L		104	80 - 120
Lithium	0.0500	0.0522		mg/L		104	80 - 120
Molybdenum	0.0500	0.0493		mg/L		99	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.00994		mg/L		99	80 - 120

Lab Sample ID: 400-159944-J-2-B MS ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 415241

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0533		mg/L		107	75 - 125
Arsenic	0.00096	J	0.0500	0.0519		mg/L		102	75 - 125
Barium	0.035		0.0500	0.0879		mg/L		105	75 - 125
Beryllium	<0.00034		0.0500	0.0539		mg/L		108	75 - 125
Boron	0.059		0.100	0.165		mg/L		106	75 - 125
Cadmium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125
Calcium	43		5.00	49.1	4	mg/L		130	75 - 125
Chromium	<0.0011		0.0500	0.0543		mg/L		109	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-159944-J-2-B MS ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 415241

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Cobalt	<0.00040		0.0500	0.0538		mg/L		108		75 - 125
Lead	<0.00035		0.0500	0.0522		mg/L		104		75 - 125
Lithium	<0.0011		0.0500	0.0579		mg/L		116		75 - 125
Molybdenum	<0.00085		0.0500	0.0509		mg/L		102		75 - 125
Selenium	<0.00024		0.0500	0.0517		mg/L		103		75 - 125
Thallium	<0.000085		0.0100	0.0103		mg/L		103		75 - 125

Lab Sample ID: 400-159944-J-2-C MSD ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 415241

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0527		mg/L		105		75 - 125	1	20
Arsenic	0.00096	J	0.0500	0.0507		mg/L		99		75 - 125	2	20
Barium	0.035		0.0500	0.0874		mg/L		104		75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0541		mg/L		108		75 - 125	0	20
Boron	0.059		0.100	0.165		mg/L		106		75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0523		mg/L		105		75 - 125	1	20
Calcium	43		5.00	48.0	4	mg/L		110		75 - 125	2	20
Chromium	<0.0011		0.0500	0.0539		mg/L		108		75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0535		mg/L		107		75 - 125	1	20
Lead	<0.00035		0.0500	0.0527		mg/L		105		75 - 125	1	20
Lithium	<0.0011		0.0500	0.0587		mg/L		117		75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0505		mg/L		101		75 - 125	1	20
Selenium	<0.00024		0.0500	0.0506		mg/L		101		75 - 125	2	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102		75 - 125	1	20

Lab Sample ID: MB 400-415242/1-A ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 415242

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		10/12/18 18:46	10/13/18 19:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/12/18 18:46	10/13/18 19:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/12/18 18:46	10/13/18 19:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 19:36	5
Boron	<0.021		0.050	0.021	mg/L		10/12/18 18:46	10/13/18 19:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/12/18 18:46	10/13/18 19:36	5
Calcium	<0.13		0.25	0.13	mg/L		10/12/18 18:46	10/13/18 19:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/12/18 18:46	10/13/18 19:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/12/18 18:46	10/13/18 19:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/12/18 18:46	10/13/18 19:36	5
Lithium	<0.0011		0.0050	0.0011	mg/L		10/12/18 18:46	10/13/18 19:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/12/18 18:46	10/13/18 19:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/12/18 18:46	10/13/18 19:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/12/18 18:46	10/13/18 19:36	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-415242/2-A
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 415242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0502		mg/L		100	80 - 120
Arsenic	0.0500	0.0488		mg/L		98	80 - 120
Barium	0.0500	0.0488		mg/L		98	80 - 120
Beryllium	0.0500	0.0550		mg/L		110	80 - 120
Boron	0.100	0.114		mg/L		114	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Calcium	5.00	4.88		mg/L		98	80 - 120
Chromium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0506		mg/L		101	80 - 120
Lead	0.0500	0.0553		mg/L		111	80 - 120
Lithium	0.0500	0.0575		mg/L		115	80 - 120
Molybdenum	0.0500	0.0486		mg/L		97	80 - 120
Selenium	0.0500	0.0526		mg/L		105	80 - 120
Thallium	0.0100	0.0108		mg/L		108	80 - 120

Lab Sample ID: 400-159951-B-2-C MS ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 415242

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0515		mg/L		103	75 - 125
Arsenic	<0.00046		0.0500	0.0490		mg/L		98	75 - 125
Barium	0.044		0.0500	0.0918		mg/L		95	75 - 125
Beryllium	<0.00034		0.0500	0.0518		mg/L		104	75 - 125
Boron	<0.021		0.100	0.0958		mg/L		96	75 - 125
Cadmium	<0.00034		0.0500	0.0488		mg/L		98	75 - 125
Calcium	16		5.00	21.2		mg/L		94	75 - 125
Chromium	0.010		0.0500	0.0619		mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0510		mg/L		102	75 - 125
Lead	<0.00035		0.0500	0.0489		mg/L		98	75 - 125
Lithium	0.0012	J	0.0500	0.0600		mg/L		118	75 - 125
Molybdenum	<0.00085		0.0500	0.0492		mg/L		98	75 - 125
Selenium	<0.00024		0.0500	0.0501		mg/L		100	75 - 125
Thallium	<0.00085		0.0100	0.00940		mg/L		94	75 - 125

Lab Sample ID: 400-159951-B-2-D MSD ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 415242

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0483		mg/L		97	75 - 125	6	20
Arsenic	<0.00046		0.0500	0.0480		mg/L		96	75 - 125	2	20
Barium	0.044		0.0500	0.0907		mg/L		92	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125	1	20
Boron	<0.021		0.100	0.0893		mg/L		89	75 - 125	7	20
Cadmium	<0.00034		0.0500	0.0483		mg/L		97	75 - 125	1	20
Calcium	16		5.00	20.6		mg/L		83	75 - 125	3	20
Chromium	0.010		0.0500	0.0596		mg/L		99	75 - 125	4	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-159951-B-2-D MSD ^5
Matrix: Water
Analysis Batch: 415414

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 415242

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	<0.00040		0.0500	0.0502		mg/L		100	75 - 125	1	20
Lead	<0.00035		0.0500	0.0479		mg/L		96	75 - 125	2	20
Lithium	0.0012	J	0.0500	0.0589		mg/L		115	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0472		mg/L		94	75 - 125	4	20
Selenium	<0.00024		0.0500	0.0479		mg/L		96	75 - 125	4	20
Thallium	<0.000085		0.0100	0.00935		mg/L		93	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-415495/13-A
Matrix: Water
Analysis Batch: 415840

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415495

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		10/15/18 15:14	10/17/18 13:37	1

Lab Sample ID: LCS 400-415495/14-A
Matrix: Water
Analysis Batch: 415840

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415495

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.000992		mg/L		99	80 - 120

Lab Sample ID: 400-160036-1 MS
Matrix: Water
Analysis Batch: 415840

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 415495

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070	F1	0.00201	0.00143	F1	mg/L		71	80 - 120

Lab Sample ID: 400-160036-1 MSD
Matrix: Water
Analysis Batch: 415840

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 415495

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070	F1	0.00201	0.00142	F1	mg/L		70	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-414174/1
Matrix: Water
Analysis Batch: 414174

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			10/04/18 17:11	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 400-414174/2
Matrix: Water
Analysis Batch: 414174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	300		mg/L		102	78 - 122

Lab Sample ID: 400-159944-G-1 DU
Matrix: Water
Analysis Batch: 414174

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	140		146	F3	mg/L		7	5

Lab Sample ID: 400-159944-G-6 DU
Matrix: Water
Analysis Batch: 414174

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	190		196		mg/L		2	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-415025/6
Matrix: Water
Analysis Batch: 415025

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			10/11/18 13:16	1

Lab Sample ID: LCS 400-415025/50
Matrix: Water
Analysis Batch: 415025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.0		mg/L		103	90 - 110

Lab Sample ID: MRL 400-415025/3
Matrix: Water
Analysis Batch: 415025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.85	J	mg/L		92	50 - 150

Lab Sample ID: 400-160209-B-1 MS
Matrix: Water
Analysis Batch: 415025

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.7		10.0	15.1		mg/L		113	73 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-160209-B-1 MSD
Matrix: Water
Analysis Batch: 415025

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.7		10.0	14.7		mg/L		110	73 - 120	2	8

Lab Sample ID: MB 400-415457/6
Matrix: Water
Analysis Batch: 415457

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			10/15/18 10:34	1

Lab Sample ID: LCS 400-415457/7
Matrix: Water
Analysis Batch: 415457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.6		mg/L		105	90 - 110

Lab Sample ID: MRL 400-415457/3
Matrix: Water
Analysis Batch: 415457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.05		mg/L		103	50 - 150

Lab Sample ID: 400-160037-C-11 MS
Matrix: Water
Analysis Batch: 415457

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<1.4		10.0	11.1		mg/L		111	73 - 120

Lab Sample ID: 400-160037-C-11 MSD
Matrix: Water
Analysis Batch: 415457

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<1.4		10.0	10.8		mg/L		108	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-415221/3
Matrix: Water
Analysis Batch: 415221

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/12/18 15:07	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 400-415221/4
Matrix: Water
Analysis Batch: 415221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

Lab Sample ID: 400-160114-A-1 MS
Matrix: Water
Analysis Batch: 415221

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.69		1.00	1.72		mg/L		103	75 - 125

Lab Sample ID: 400-160114-A-1 MSD
Matrix: Water
Analysis Batch: 415221

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.69		1.00	1.72		mg/L		103	75 - 125	0	4

Lab Sample ID: 400-160036-1 DU
Matrix: Water
Analysis Batch: 415221

Client Sample ID: APMW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.090	J	0.0900	J	mg/L		0	4

Lab Sample ID: MB 400-415510/3
Matrix: Water
Analysis Batch: 415510

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			10/15/18 15:29	1

Lab Sample ID: LCS 400-415510/4
Matrix: Water
Analysis Batch: 415510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.02		mg/L		101	90 - 110

Lab Sample ID: 400-160036-5 MS
Matrix: Water
Analysis Batch: 415510

Client Sample ID: APMW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.090	J	1.00	0.980		mg/L		89	75 - 125

Lab Sample ID: 400-160036-5 MSD
Matrix: Water
Analysis Batch: 415510

Client Sample ID: APMW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.090	J	1.00	0.960		mg/L		87	75 - 125	2	4

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-415203/6
Matrix: Water
Analysis Batch: 415203

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/12/18 13:21	1

Lab Sample ID: LCS 400-415203/7
Matrix: Water
Analysis Batch: 415203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.7		mg/L		98	90 - 110

Lab Sample ID: MRL 400-415203/3
Matrix: Water
Analysis Batch: 415203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	3.47	J	mg/L		69	50 - 150

Lab Sample ID: 400-159933-G-4 MS
Matrix: Water
Analysis Batch: 415203

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	9.00		mg/L		90	77 - 128

Lab Sample ID: 400-159933-G-4 MSD
Matrix: Water
Analysis Batch: 415203

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfate	<1.4		10.0	8.67		mg/L		87	77 - 128	4	5

Lab Sample ID: MB 400-415593/6
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			10/16/18 08:49	1

Lab Sample ID: LCS 400-415593/7
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.8		mg/L		98	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-415593/3
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	3.47	J	mg/L		69	50 - 150

Lab Sample ID: 400-159978-A-1 MS
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	27		10.0	38.6		mg/L		111	77 - 128

Lab Sample ID: 400-159978-A-1 MSD
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	27		10.0	37.0		mg/L		96	77 - 128	4	5

Lab Sample ID: 400-160048-O-2 MS
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	510		10.0	478	4	mg/L		-303	77 - 128

Lab Sample ID: 400-160048-O-2 MSD
Matrix: Water
Analysis Batch: 415593

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	510		10.0	456	4	mg/L		-525	77 - 128	5	5

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-73764-29084.1	
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2	
Company: Southern Company		Due Date Requested:		Job #:	
Address: PO BOX 2641 GSC8		TAT Requested (days):		Preservation Codes:	
City: Birmingham		PO #: SCS10347656		A - HCL	
State, Zip: AL, 35291		WO #:		B - NaOH	
Phone: 205-992-7762(Tel)		Project #:		C - Zn Acetate	
Email: CBSSELLER@SOUTHERNCO.COM		SSOW#:		D - Nitric Acid	
Project Name: CCR - Plant Watson		Sample Date		E - NaHSO4	
Site: Ash Pond		Sample Time		F - MeOH	
		Sample Type (C=comp, G=grab)		G - Amchlor	
		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		H - Ascorbic Acid	
		Preservation Code:		I - Ice	
				J - DI Water	
				K - EDTA	
				L - EDA	
				M - Hexane	
				N - None	
				O - AsNaO2	
				P - Na2O4S	
				Q - Na2SO3	
				R - Na2SO4	
				S - H2SO4	
				T - TSP Dodecahydrate	
				U - Acetone	
				V - MCAA	
				W - pH 4-5	
				X - other (specify)	
				Z - other (specify)	
				Other:	
				Total Number of containers	
				Special Instructions/Note:	
				Special Instructions/QC Requirements:	
				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
				Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months	
				Special Instructions/QC Requirements:	
				Method of Shipment:	
				Date/Time: 10/3/18 1540 Company: TA	
				Date/Time: Company:	
				Date/Time: Company:	
				Cooler Temperature(s) °C and Other Remarks: 1.2°C 0.0°C 0.0°C IRB	



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR-Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking Net(s): COC No: 400-73764-29084.2 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP 5M4500 Cl-E-Chloride, 5M4500_S04_E-Sulfate, 4500_F-C-Fluoride, 2540C-TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,LI,Mo,Se,Tl, 7470A-Hg	
Sample Identification Dup-1 FB-1		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Z - other (specify) Other:	
Sample Date 10/18/18 10/21/18		Sample Time 1250 1545	
Sample Type G=grab G G		Matrix (W=water, S=solid, O=waste/oil, BT=issue, A=Air) Water Water Water	
Special Instructions/Note:		Total Number of containers:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date: 10/13/18 Time: 1540		Relinquished by: Kathy L. Davis Date: 10/13/18 Time: 1540	
Relinquished by: [Signature] Date: [Blank] Time: [Blank]		Relinquished by: [Blank] Date: [Blank] Time: [Blank]	
Relinquished by: [Blank] Date: [Blank] Time: [Blank]		Relinquished by: [Blank] Date: [Blank] Time: [Blank]	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 1.2°C, 0.0°C, 0.0°C IRB	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160036-1

SDG Number: Ash Pond

Login Number: 160036

List Number: 1

Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2°C, 0.0°C, 0.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-160036-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

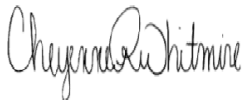
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

10/31/2018 2:18:01 PM

Cheyenne Whitmire, Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Job ID: 400-160036-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-160036-2

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-393749: The following samples were prepared at a reduced aliquot due to potential matrix interference. Samples were yellow, contained sediment, and had strong odors similar to that of sulfur. APMW-1 (400-160036-1), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-7 (400-160036-7), APMW-8 (400-160036-8) and DUP-1 (400-160036-12)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-393749: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-160036-1), APMW-2 (400-160036-2), APMW-3 (400-160036-3), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-6 (400-160036-6), APMW-7 (400-160036-7), APMW-8 (400-160036-8), APMW-9 (400-160036-9), APMW-10 (400-160036-10), DUP-2 (400-160036-11), DUP-1 (400-160036-12) and FB-1 (400-160036-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-393745: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-160036-1), APMW-2 (400-160036-2), APMW-3 (400-160036-3), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-6 (400-160036-6), APMW-7 (400-160036-7), APMW-8 (400-160036-8), APMW-9 (400-160036-9), APMW-10 (400-160036-10), DUP-2 (400-160036-11), DUP-1 (400-160036-12) and FB-1 (400-160036-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-393745: The following samples were prepared at a reduced aliquot due to potential matrix interference. Samples were yellow, contained sediment, and had strong odors similar to that of sulfur. APMW-1 (400-160036-1), APMW-4 (400-160036-4), APMW-5 (400-160036-5), APMW-7 (400-160036-7), APMW-8 (400-160036-8) and DUP-1 (400-160036-12)

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-160036-1	APMW-1	Water	10/01/18 10:31	10/03/18 15:40
400-160036-2	APMW-2	Water	10/01/18 11:55	10/03/18 15:40
400-160036-3	APMW-3	Water	10/01/18 12:54	10/03/18 15:40
400-160036-4	APMW-4	Water	10/01/18 13:56	10/03/18 15:40
400-160036-5	APMW-5	Water	10/02/18 16:11	10/03/18 15:40
400-160036-6	APMW-6	Water	10/02/18 15:15	10/03/18 15:40
400-160036-7	APMW-7	Water	10/02/18 14:20	10/03/18 15:40
400-160036-8	APMW-8	Water	10/02/18 12:25	10/03/18 15:40
400-160036-9	APMW-9	Water	10/02/18 11:25	10/03/18 15:40
400-160036-10	APMW-10	Water	10/02/18 10:31	10/03/18 15:40
400-160036-11	DUP-2	Water	10/02/18 09:31	10/03/18 15:40
400-160036-12	DUP-1	Water	10/01/18 12:56	10/03/18 15:40
400-160036-13	FB-1	Water	10/02/18 15:45	10/03/18 15:40

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-160036-1

Date Collected: 10/01/18 10:31

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.17		0.346	0.449	1.00	0.106	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.86		0.573	0.727	1.00	0.461	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	79.6		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	8.03		0.669	0.854	5.00	0.461	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-160036-2

Date Collected: 10/01/18 11:55

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	13.0		0.589	1.31	1.00	0.0846	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.97		0.548	0.844	1.00	0.329	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	79.6		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	19.9		0.805	1.56	5.00	0.329	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-160036-3

Date Collected: 10/01/18 12:54

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.24		0.190	0.220	1.00	0.103	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	7.30		0.613	0.909	1.00	0.353	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	76.6		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	8.54		0.642	0.935	5.00	0.353	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-160036-4

Date Collected: 10/01/18 13:56

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.791		0.180	0.194	1.00	0.116	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.70		0.469	0.531	1.00	0.461	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	75.9		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.49		0.502	0.565	5.00	0.461	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-160036-5

Date Collected: 10/02/18 16:11

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.623		0.162	0.172	1.00	0.112	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.17		0.555	0.674	1.00	0.474	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	79.6		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.79		0.578	0.696	5.00	0.474	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-160036-6

Date Collected: 10/02/18 15:15

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.09		0.185	0.209	1.00	0.0915	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.35		0.395	0.450	1.00	0.402	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	78.1		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.44		0.436	0.496	5.00	0.402	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-160036-7

Date Collected: 10/02/18 14:20

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.97		0.344	0.436	1.00	0.120	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.21		0.612	0.778	1.00	0.487	pCi/L	10/08/18 16:08	10/23/18 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/08/18 16:08	10/23/18 09:52	1
Y Carrier	76.6		40 - 110					10/08/18 16:08	10/23/18 09:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	8.19		0.702	0.892	5.00	0.487	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-160036-8

Date Collected: 10/02/18 12:25

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.18		0.221	0.245	1.00	0.115	pCi/L	10/08/18 15:31	10/30/18 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					10/08/18 15:31	10/30/18 06:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.45		0.526	0.615	1.00	0.478	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	76.3		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.63		0.571	0.662	5.00	0.478	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-160036-9

Date Collected: 10/02/18 11:25

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.38		0.269	0.344	1.00	0.0855	pCi/L	10/08/18 15:31	10/30/18 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					10/08/18 15:31	10/30/18 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.05		0.488	0.674	1.00	0.313	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	82.6		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.43		0.557	0.757	5.00	0.313	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-160036-10

Date Collected: 10/02/18 10:31

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.11		0.186	0.211	1.00	0.0854	pCi/L	10/08/18 15:31	10/30/18 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/08/18 15:31	10/30/18 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.27		0.368	0.423	1.00	0.363	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	80.4		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.38		0.412	0.473	5.00	0.363	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: DUP-2

Date Collected: 10/02/18 09:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-11

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.35		0.200	0.234	1.00	0.0868	pCi/L	10/08/18 15:31	10/30/18 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/08/18 15:31	10/30/18 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.87		0.342	0.383	1.00	0.352	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	78.9		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.22		0.396	0.449	5.00	0.352	pCi/L		10/31/18 13:21	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: DUP-1

Lab Sample ID: 400-160036-12

Date Collected: 10/01/18 12:56

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.847		0.187	0.202	1.00	0.112	pCi/L	10/08/18 15:31	10/30/18 06:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/08/18 15:31	10/30/18 06:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.02		0.405	0.446	1.00	0.423	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	81.5		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.87		0.446	0.490	5.00	0.423	pCi/L		10/31/18 13:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-160036-13

Date Collected: 10/02/18 15:45

Matrix: Water

Date Received: 10/03/18 15:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.198		0.0850	0.0869	1.00	0.0806	pCi/L	10/08/18 15:31	10/30/18 06:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 15:31	10/30/18 06:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.698		0.252	0.260	1.00	0.325	pCi/L	10/08/18 16:08	10/23/18 09:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 16:08	10/23/18 09:53	1
Y Carrier	78.5		40 - 110					10/08/18 16:08	10/23/18 09:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.896		0.266	0.274	5.00	0.325	pCi/L		10/31/18 13:24	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 10/01/18 10:31

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-2

Date Collected: 10/01/18 11:55

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-3

Date Collected: 10/01/18 12:54

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-4

Date Collected: 10/01/18 13:56

Date Received: 10/03/18 15:40

Lab Sample ID: 400-160036-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-160036-5

Date Collected: 10/02/18 16:11

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-160036-6

Date Collected: 10/02/18 15:15

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-160036-7

Date Collected: 10/02/18 14:20

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:52	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-160036-8

Date Collected: 10/02/18 12:25

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:17	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-160036-9

Date Collected: 10/02/18 11:25

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398235	10/30/18 06:18	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-160036-10

Date Collected: 10/02/18 10:31

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398234	10/30/18 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: DUP-2

Lab Sample ID: 400-160036-11

Date Collected: 10/02/18 09:31

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398234	10/30/18 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:21	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-160036-12

Date Collected: 10/01/18 12:56

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398234	10/30/18 06:19	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:24	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-160036-13

Date Collected: 10/02/18 15:45

Matrix: Water

Date Received: 10/03/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			393745	10/08/18 15:31	JLC	TAL SL
Total/NA	Analysis	9315		1	398234	10/30/18 06:20	CDR	TAL SL
Total/NA	Prep	PrecSep_0			393749	10/08/18 16:08	JLC	TAL SL
Total/NA	Analysis	9320		1	396715	10/23/18 09:53	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	398556	10/31/18 13:24	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Rad

Prep Batch: 393745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	PrecSep-21	
400-160036-2	APMW-2	Total/NA	Water	PrecSep-21	
400-160036-3	APMW-3	Total/NA	Water	PrecSep-21	
400-160036-4	APMW-4	Total/NA	Water	PrecSep-21	
400-160036-5	APMW-5	Total/NA	Water	PrecSep-21	
400-160036-6	APMW-6	Total/NA	Water	PrecSep-21	
400-160036-7	APMW-7	Total/NA	Water	PrecSep-21	
400-160036-8	APMW-8	Total/NA	Water	PrecSep-21	
400-160036-9	APMW-9	Total/NA	Water	PrecSep-21	
400-160036-10	APMW-10	Total/NA	Water	PrecSep-21	
400-160036-11	DUP-2	Total/NA	Water	PrecSep-21	
400-160036-12	DUP-1	Total/NA	Water	PrecSep-21	
400-160036-13	FB-1	Total/NA	Water	PrecSep-21	
MB 160-393745/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-393745/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-393745/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 393749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-160036-1	APMW-1	Total/NA	Water	PrecSep_0	
400-160036-2	APMW-2	Total/NA	Water	PrecSep_0	
400-160036-3	APMW-3	Total/NA	Water	PrecSep_0	
400-160036-4	APMW-4	Total/NA	Water	PrecSep_0	
400-160036-5	APMW-5	Total/NA	Water	PrecSep_0	
400-160036-6	APMW-6	Total/NA	Water	PrecSep_0	
400-160036-7	APMW-7	Total/NA	Water	PrecSep_0	
400-160036-8	APMW-8	Total/NA	Water	PrecSep_0	
400-160036-9	APMW-9	Total/NA	Water	PrecSep_0	
400-160036-10	APMW-10	Total/NA	Water	PrecSep_0	
400-160036-11	DUP-2	Total/NA	Water	PrecSep_0	
400-160036-12	DUP-1	Total/NA	Water	PrecSep_0	
400-160036-13	FB-1	Total/NA	Water	PrecSep_0	
MB 160-393749/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-393749/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-393749/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-393745/22-A
Matrix: Water
Analysis Batch: 398233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393745

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2396		0.104	0.106	1.00	0.115	pCi/L	10/08/18 15:31	10/30/18 06:23	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 15:31	10/30/18 06:23	1

Lab Sample ID: LCS 160-393745/1-A
Matrix: Water
Analysis Batch: 398235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393745

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.77		1.12	1.00	0.0940	pCi/L	95	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	98.2		40 - 110						

Lab Sample ID: LCSD 160-393745/2-A
Matrix: Water
Analysis Batch: 398235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 393745

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	10.90		1.13	1.00	0.0776	pCi/L	96	68 - 137	0.06	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	102		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-393749/22-A
Matrix: Water
Analysis Batch: 396705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 393749

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7907		0.288	0.297	1.00	0.396	pCi/L	10/08/18 16:08	10/23/18 09:56	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/08/18 16:08	10/23/18 09:56	1
Y Carrier	81.1		40 - 110					10/08/18 16:08	10/23/18 09:56	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
 SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-393749/1-A
Matrix: Water
Analysis Batch: 396715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 393749

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	10.9	11.67		1.30	1.00	0.360	pCi/L	107	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.2		40 - 110
Y Carrier	81.9		40 - 110


Lab Sample ID: LCSD 160-393749/2-A
Matrix: Water
Analysis Batch: 396715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 393749

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
Radium-228	10.9	10.83		1.21	1.00	0.337	pCi/L	100	56 - 140	0.34	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	81.5		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s):									
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		COC No: 400-73764-29084.1									
Company: Southern Company		Address: PO BOX 2641 GSC8		Page: Page 1 of 2									
City: Birmingham		State, Zip: AL, 35291		Job #:									
Phone: 205-992-7762(Tel)		PO #: SCS10347656		<div style="border: 1px solid black; padding: 5px; text-align: center;">  400-160036 COC </div>									
Email: CBSSELLER@SOUTHERNCO.COM		WO #:											
Project Name: CCR-Plant Watson		Project #: 40009375											
Site: Ash Pond		SSOW#:		Due Date Requested:									
		TAT Requested (days):											
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wast/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Ra226Ra228 GFC	SM4500 Cl ⁻ Chloride, SM4500 SO ₄ ⁻² Sulfate	4500 F, C - Fluoride, 2540C - TDS	6020 - Sb, As, Ba, B, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Hg	Analysis Requested	Preservation Codes:	Special Instructions/Note:
APMW-1	10/11/18	1031	G	Water	X	X						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
APMW-2	10/11/18	1155		Water								M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
APMW-3	10/11/18	1254		Water									
APMW-4	10/11/18	1356		Water									
APMW-5	10/21/18	1611		Water									
APMW-6	10/21/18	1515		Water									
APMW-7	10/21/18	1420		Water									
APMW-8	10/21/18	1225		Water									
APMW-9	10/21/18	1125		Water									
APMW-10	10/21/18	1031		Water									
DUP-2	10/21/18	0931	G	Water	X	X							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological												Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)												Special Instructions/QC Requirements:	
Empty Kit Requisitioned by: _____ Date: _____												Method of Shipment:	
Requisitioned by: _____ Date/Time: 10/31/18 1540												Date/Time: 10/31/18 1540	
Requisitioned by: _____ Date/Time:												Date/Time:	
Requisitioned by: _____ Date/Time:												Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No												Cooler Temperature(s) °C and Other Remarks: 1.2°C 0.0°C 0.0°C IRB	
Custody Seal No.: _____												Company: TA Company	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160036-2

SDG Number: Ash Pond

Login Number: 160036

List Number: 1

Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2°C, 0.0°C, 0.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-160036-2

SDG Number: Ash Pond

Login Number: 160036

List Number: 2

Creator: Hellm, Michael

List Source: TestAmerica St. Louis

List Creation: 10/05/18 03:25 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-16	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-18 *
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-18 *
Missouri	State Program	7	780	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-160036-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-161568-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

12/14/2018 3:07:49 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Job ID: 400-161568-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-161568-1

Metals

Method(s) 6020, 6020B: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11) and DUP-02 (400-161568-13). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 419229 and analytical batch 419485 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 419485 was outside control limits: (400-161568-B-1-B SD ^25)

Method(s) 6020: The post digestion spike % recovery for Boron and Calcium associated with batch 419485 was outside of control limits.

General Chemistry

Method(s) SM 4500 F C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 419842 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 F C: This LCS is for batch 419842 and its subsequent samples. (LCS 400-419858/4)

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-161568-A-10 MS) and (400-161568-A-10 MSD)

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 419614 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), DUP-02 (400-161568-13), (400-161568-A-10 MS) and (400-161568-A-10 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 419251 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-161385-A-1 MS) and (400-161385-A-1 MSD)

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-161761-D-3 MS) and (400-161761-D-3 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 419702 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), (400-161385-A-1), (400-161385-A-1 MS), (400-161385-A-1 MSD),

Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Job ID: 400-161568-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

DUP-02 (400-161568-13), (400-161761-D-3), (400-161761-D-3 MS) and (400-161761-D-3 MSD). Elevated reporting limits (RLs) are provided.

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Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-161568-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total
Barium	0.67		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Lead	0.00035	J	0.0013	0.00035	mg/L	5		6020	Recoverable Total
Boron - DL	3.0		0.25	0.11	mg/L	25		6020	Recoverable Total
Calcium - DL	240		1.3	0.63	mg/L	25		6020	Recoverable Total
Lithium - DL	0.0096	J	0.025	0.0055	mg/L	25		6020	Recoverable Total
Total Dissolved Solids	3500		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	1700		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	11		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.01				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-161568-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0012	J	0.0013	0.00046	mg/L	5		6020	Total
Barium	3.1		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Selenium	0.00072	J	0.0013	0.00071	mg/L	5		6020	Recoverable Total
Boron - DL	3.5		0.50	0.21	mg/L	50		6020	Recoverable Total
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Recoverable Total
Lithium - DL	0.024	J	0.050	0.011	mg/L	50		6020	Recoverable Total
Total Dissolved Solids	3800		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2700		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1.9	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	5.98				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-161568-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.067		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Recoverable Total
Cobalt	0.0027		0.0025	0.00040	mg/L	5		6020	Recoverable Total
Molybdenum	0.062		0.015	0.0020	mg/L	5		6020	Recoverable Total
Boron - DL	4.6		0.50	0.21	mg/L	50		6020	Recoverable Total
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Recoverable Total

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-161568-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead - RA	0.00048	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.081		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium - RA	0.0010	J	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	19000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	11000		600	420	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.42		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1000		500	140	mg/L	100		SM 4500 SO4 E	Total/NA
Field pH	6.55				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-161568-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.50		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0034		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0083	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	1.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	190		1.3	0.63	mg/L	25		6020	Total Recoverable
Lead - RA	0.00062	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.077		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7600		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4000		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.58		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	310		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.43				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.26		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.12		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.10		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	5.5		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	310		5.0	2.5	mg/L	100		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-5 (Continued)

Lab Sample ID: 400-161568-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead - RA	0.0011	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.074		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	15000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	8900		400	280	mg/L	200		SM 4500 Cl- E	Total/NA
Fluoride	0.11		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	860		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.42				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-161568-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.57		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.28		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00061	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.00076	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Boron - DL	13		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	180		10	5.0	mg/L	200		6020	Total Recoverable
Molybdenum - DL	1.0		0.60	0.079	mg/L	200		6020	Total Recoverable
Lithium - RA	0.049		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2400		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	370		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	7.1				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0028		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	1.1		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0014	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0066	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	0.82		0.25	0.11	mg/L	25		6020	Total Recoverable
Lead - RA	0.0019		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.014		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6900		130	85	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-7 (Continued)

Lab Sample ID: 400-161568-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3800		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	35		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.4				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-161568-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.081		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.21		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Molybdenum	0.16		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	19		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	460		10	5.0	mg/L	200		6020	Total Recoverable
Lead - RA	0.0016		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.16		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	7300		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3600		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	610		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.75				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-161568-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.43		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron - DL	5.6		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	280		5.0	2.5	mg/L	100		6020	Total Recoverable
Lithium - RA	0.018		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	5000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3000		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.070 J		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.25				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-161568-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.11		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-10 (Continued)

Lab Sample ID: 400-161568-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	67		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.11		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	1.8		0.25	0.11	mg/L	25		6020	Total Recoverable
Lead - RA	0.0011	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.038		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	2700		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1300		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.88		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	290		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.89				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-161568-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.43		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron - DL	5.6		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	280		5.0	2.5	mg/L	100		6020	Total Recoverable
Lead - RA	0.00052	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.017		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	5200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3000		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-161568-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead - RA	0.0017		0.0013	0.00035	mg/L	5		6020	Total Recoverable

Client Sample ID: DUP-02

Lab Sample ID: 400-161568-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00053	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.00063	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Arsenic - DL	0.46		0.050	0.018	mg/L	200		6020	Total Recoverable
Boron - DL	13		2.0	0.84	mg/L	200		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
 SDG: Ash Pond

Client Sample ID: DUP-02 (Continued)

Lab Sample ID: 400-161568-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium - DL	180		10	5.0	mg/L	200		6020	Total Recoverable
Molybdenum - DL	1.0		0.60	0.079	mg/L	200		6020	Total Recoverable
Lead - RA	0.0018		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium - RA	0.057		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		120	84	mg/L	60		SM 4500 Cl- E	Total/NA
Fluoride	1.1		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-02

Lab Sample ID: 400-161568-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0055	J	0.015	0.0020	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-161568-1	APMW-1	Water	11/02/18 14:20	11/03/18 10:05
400-161568-2	APMW-2	Water	11/02/18 12:10	11/03/18 10:05
400-161568-3	APMW-3	Water	11/02/18 15:45	11/03/18 10:05
400-161568-4	APMW-4	Water	11/02/18 11:23	11/03/18 10:05
400-161568-5	APMW-5	Water	11/02/18 10:00	11/03/18 10:05
400-161568-6	APMW-6	Water	11/02/18 08:45	11/03/18 10:05
400-161568-7	APMW-7	Water	11/02/18 07:50	11/03/18 10:05
400-161568-8	APMW-8	Water	11/01/18 16:30	11/03/18 10:05
400-161568-9	APMW-9	Water	11/01/18 15:37	11/03/18 10:05
400-161568-10	APMW-10	Water	11/01/18 14:20	11/03/18 10:05
400-161568-11	DUP-01	Water	11/01/18 14:37	11/03/18 10:05
400-161568-12	FB-01	Water	11/01/18 16:32	11/03/18 10:05
400-161568-13	DUP-02	Water	11/02/18 07:45	11/03/18 10:05
400-161568-14	FB-02	Water	11/02/18 10:03	11/03/18 10:05

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-161568-1

Date Collected: 11/02/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 11:54	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 11:54	5
Barium	0.67		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 11:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 11:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 11:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 11:54	5
Lead	0.00035	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 11:54	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 11:54	5
Selenium	<0.00071	F1	0.0013	0.00071	mg/L		11/12/18 13:37	11/13/18 11:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 11:54	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0		0.25	0.11	mg/L		11/12/18 13:37	11/14/18 04:07	25
Calcium	240		1.3	0.63	mg/L		11/12/18 13:37	11/14/18 04:07	25
Lithium	0.0096	J	0.025	0.0055	mg/L		11/12/18 13:37	11/14/18 04:07	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/20/18 01:22	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3500		50	34	mg/L			11/07/18 10:48	1
Chloride	1700		120	84	mg/L			11/14/18 17:19	60
Fluoride	0.11		0.10	0.032	mg/L			11/12/18 14:44	1
Sulfate	11		5.0	1.4	mg/L			11/12/18 13:47	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.01				SU			11/02/18 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-161568-2

Date Collected: 11/02/18 12:10

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:12	5
Arsenic	0.0012	J	0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:12	5
Barium	3.1		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 12:12	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:12	5
Selenium	0.00072	J	0.0013	0.00071	mg/L		11/12/18 13:37	11/13/18 12:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:12	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.50	0.21	mg/L		11/12/18 13:37	11/14/18 04:11	50
Calcium	320		2.5	1.3	mg/L		11/12/18 13:37	11/14/18 04:11	50
Lithium	0.024	J	0.050	0.011	mg/L		11/12/18 13:37	11/14/18 04:11	50

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/20/18 01:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3800		50	34	mg/L			11/07/18 10:48	1
Chloride	2700		120	84	mg/L			11/14/18 17:19	60
Fluoride	0.080	J	0.10	0.032	mg/L			11/16/18 11:16	1
Sulfate	1.9	J	5.0	1.4	mg/L			11/12/18 13:47	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.98				SU			11/02/18 12:10	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-161568-3

Date Collected: 11/02/18 15:45

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:33	5
Arsenic	0.067		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:33	5
Barium	0.10		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:33	5
Cobalt	0.0027		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:33	5
Molybdenum	0.062		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:33	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.6		0.50	0.21	mg/L		11/12/18 13:37	11/14/18 04:14	50
Calcium	310		2.5	1.3	mg/L		11/12/18 13:37	11/14/18 04:14	50

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:25	5
Lead	0.00048	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:25	5
Lithium	0.081		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:25	5
Selenium	0.0010	J	0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:25	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	19000		1000	680	mg/L			11/07/18 10:48	1
Chloride	11000		600	420	mg/L			11/14/18 18:10	300
Fluoride	0.42		0.10	0.032	mg/L			11/16/18 11:18	1
Sulfate	1000		500	140	mg/L			11/15/18 10:29	100

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.55				SU			11/02/18 15:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-161568-4

Date Collected: 11/02/18 11:23

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:37	5
Arsenic	0.018		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:37	5
Barium	0.50		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:37	5
Chromium	0.0026		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:37	5
Cobalt	0.0034		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:37	5
Molybdenum	0.0083	J	0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:37	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.25	0.11	mg/L		11/12/18 13:37	11/14/18 04:18	25
Calcium	190		1.3	0.63	mg/L		11/12/18 13:37	11/14/18 04:18	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:29	5
Lead	0.00062	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:29	5
Lithium	0.077		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:29	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7600		130	85	mg/L			11/07/18 10:48	1
Chloride	4000		180	130	mg/L			11/14/18 17:46	90
Fluoride	0.58		0.10	0.032	mg/L			11/16/18 11:20	1
Sulfate	310		50	14	mg/L			11/12/18 14:20	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.43				SU			11/02/18 11:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Date Collected: 11/02/18 10:00

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:40	5
Arsenic	0.26		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:40	5
Barium	0.12		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:40	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:40	5
Molybdenum	0.10		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:40	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		1.0	0.42	mg/L		11/12/18 13:37	11/14/18 04:21	100
Calcium	310		5.0	2.5	mg/L		11/12/18 13:37	11/14/18 04:21	100

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:33	5
Lead	0.0011	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:33	5
Lithium	0.074		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:33	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:33	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	15000		1000	680	mg/L			11/07/18 10:48	1
Chloride	8900		400	280	mg/L			11/14/18 17:46	200
Fluoride	0.11		0.10	0.032	mg/L			11/16/18 11:22	1
Sulfate	860		100	28	mg/L			11/12/18 14:23	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.42				SU			11/02/18 10:00	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-161568-6

Date Collected: 11/02/18 08:45

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:44	5
Arsenic	0.57		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:44	5
Barium	0.28		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:44	5
Cadmium	0.00061	J	0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:44	5
Cobalt	0.00076	J	0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:44	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 12:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:44	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	13		2.0	0.84	mg/L		11/12/18 13:37	11/14/18 04:25	200
Calcium	180		10	5.0	mg/L		11/12/18 13:37	11/14/18 04:25	200
Molybdenum	1.0		0.60	0.079	mg/L		11/12/18 13:37	11/14/18 04:25	200

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:36	5
Lithium	0.049		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:36	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:36	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4600		50	34	mg/L			11/07/18 10:48	1
Chloride	2400		120	84	mg/L			11/14/18 17:27	60
Fluoride	1.1		0.10	0.032	mg/L			11/16/18 11:25	1
Sulfate	370		100	28	mg/L			11/15/18 11:07	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.1				SU			11/02/18 08:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Date Collected: 11/02/18 07:50

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:48	5
Arsenic	0.0028		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:48	5
Barium	1.1		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:48	5
Calcium	110		0.25	0.13	mg/L		11/12/18 13:37	11/13/18 12:48	5
Chromium	0.0014	J	0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:48	5
Molybdenum	0.0066	J	0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:48	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.82		0.25	0.11	mg/L		11/12/18 13:37	11/14/18 04:46	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:40	5
Lead	0.0019		0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:40	5
Lithium	0.014		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:40	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6900		130	85	mg/L			11/07/18 10:48	1
Chloride	3800		180	130	mg/L			11/14/18 17:47	90
Fluoride	0.14		0.10	0.032	mg/L			11/16/18 11:27	1
Sulfate	35		5.0	1.4	mg/L			11/15/18 10:16	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.4				SU			11/02/18 07:50	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-161568-8

Date Collected: 11/01/18 16:30

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 12:51	5
Arsenic	0.081		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 12:51	5
Barium	0.21		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 12:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 12:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 12:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 12:51	5
Molybdenum	0.16		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 12:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 12:51	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19		2.0	0.84	mg/L		11/12/18 13:37	11/14/18 04:50	200
Calcium	460		10	5.0	mg/L		11/12/18 13:37	11/14/18 04:50	200

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:43	5
Lead	0.0016		0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:43	5
Lithium	0.16		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:43	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7300		130	85	mg/L			11/07/18 10:48	1
Chloride	3600		180	130	mg/L			11/14/18 17:46	90
Fluoride	1.1		0.10	0.032	mg/L			11/12/18 14:47	1
Sulfate	610		100	28	mg/L			11/12/18 14:16	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.75				SU			11/01/18 16:30	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-161568-9

Date Collected: 11/01/18 15:37

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:01	5
Arsenic	0.0014		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 13:01	5
Barium	0.43		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:01	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 13:01	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 13:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:01	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.6		1.0	0.42	mg/L		11/12/18 13:37	11/14/18 04:53	100
Calcium	280		5.0	2.5	mg/L		11/12/18 13:37	11/14/18 04:53	100

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:47	5
Lithium	0.018		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:47	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 15:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5000		50	34	mg/L			11/07/18 10:48	1
Chloride	3000		120	84	mg/L			11/14/18 17:16	60
Fluoride	0.070	J	0.10	0.032	mg/L			11/12/18 14:49	1
Sulfate	270		50	14	mg/L			11/12/18 14:16	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.25				SU			11/01/18 15:37	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-161568-10

Date Collected: 11/01/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:04	5
Arsenic	0.11		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 13:04	5
Barium	0.23		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:04	5
Calcium	67		0.25	0.13	mg/L		11/12/18 13:37	11/13/18 13:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:04	5
Molybdenum	0.11		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 13:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:04	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.25	0.11	mg/L		11/12/18 13:37	11/14/18 04:57	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:51	5
Lead	0.0011	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:51	5
Lithium	0.038		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:51	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:51	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 16:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2700		25	17	mg/L			11/07/18 10:48	1
Chloride	1300		120	84	mg/L			11/14/18 17:19	60
Fluoride	0.88		0.10	0.032	mg/L			11/12/18 14:53	1
Sulfate	290		50	14	mg/L			11/12/18 14:20	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.89				SU			11/01/18 14:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 11/01/18 14:37
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:08	5
Arsenic	0.0013		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 13:08	5
Barium	0.43		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:08	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 13:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.6		1.0	0.42	mg/L		11/12/18 13:37	11/14/18 05:01	100
Calcium	280		5.0	2.5	mg/L		11/12/18 13:37	11/14/18 05:01	100

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:54	5
Lead	0.00052	J	0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:54	5
Lithium	0.017		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:54	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:54	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5200		50	34	mg/L			11/07/18 10:48	1
Chloride	3000		120	84	mg/L			11/14/18 17:16	60
Fluoride	0.070	J	0.10	0.032	mg/L			11/12/18 14:55	1
Sulfate	270		50	14	mg/L			11/12/18 14:20	10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 11/01/18 16:32
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 13:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:11	5
Calcium	<0.13		0.25	0.13	mg/L		11/12/18 13:37	11/13/18 13:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:11	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 13:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:11	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 11:53	5
Boron	<0.021		0.050	0.021	mg/L		11/12/18 13:37	11/14/18 04:00	5
Lead	0.0017		0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 04:00	5
Lithium	<0.0011		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 04:00	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 04:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 16:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/07/18 10:48	1
Chloride	<1.4		2.0	1.4	mg/L			11/14/18 16:42	1
Fluoride	<0.032		0.10	0.032	mg/L			11/12/18 14:59	1
Sulfate	<1.4		5.0	1.4	mg/L			11/12/18 13:47	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 11/02/18 07:45
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-13
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:33	5
Barium	0.24		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:33	5
Cadmium	0.00053	J	0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:33	5
Cobalt	0.00063	J	0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:33	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.46		0.050	0.018	mg/L		11/12/18 13:37	11/14/18 05:04	200
Boron	13		2.0	0.84	mg/L		11/12/18 13:37	11/14/18 05:04	200
Calcium	180		10	5.0	mg/L		11/12/18 13:37	11/14/18 05:04	200
Molybdenum	1.0		0.60	0.079	mg/L		11/12/18 13:37	11/14/18 05:04	200

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 05:58	5
Lead	0.0018		0.0013	0.00035	mg/L		11/12/18 13:37	11/14/18 05:58	5
Lithium	0.057		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 05:58	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/14/18 05:58	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 16:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4600		50	34	mg/L			11/07/18 10:48	1
Chloride	2300		120	84	mg/L			11/14/18 17:28	60
Fluoride	1.1		0.10	0.032	mg/L			11/16/18 11:30	1
Sulfate	330		100	28	mg/L			11/15/18 11:07	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: FB-02
Date Collected: 11/02/18 10:03
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-14
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 13:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 13:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 13:36	5
Calcium	<0.13		0.25	0.13	mg/L		11/12/18 13:37	11/13/18 13:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 13:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 13:36	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 13:36	5
Molybdenum	0.0055	J	0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 13:36	5
Selenium	<0.00071	^	0.0013	0.00071	mg/L		11/12/18 13:37	11/13/18 13:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 13:36	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/12/18 13:37	11/14/18 04:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/14/18 11:57	5
Boron	<0.021		0.050	0.021	mg/L		11/12/18 13:37	11/14/18 04:04	5
Lithium	<0.0011		0.0050	0.0011	mg/L		11/12/18 13:37	11/14/18 04:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:20	11/12/18 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/07/18 10:48	1
Chloride	<1.4		2.0	1.4	mg/L			11/14/18 16:49	1
Fluoride	<0.032		0.10	0.032	mg/L			11/16/18 12:12	1
Sulfate	<1.4		5.0	1.4	mg/L			11/15/18 10:23	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 11/02/18 14:20

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 11:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	25	419485	11/14/18 04:07	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	420262	11/20/18 01:22	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:44	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	419251	11/12/18 13:47	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 14:20	CDH	TAL PEN

Client Sample ID: APMW-2

Date Collected: 11/02/18 12:10

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:12	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	50	419485	11/14/18 04:11	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	420262	11/20/18 01:26	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	419251	11/12/18 13:47	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 12:10	CDH	TAL PEN

Client Sample ID: APMW-3

Date Collected: 11/02/18 15:45

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	50	419485	11/14/18 04:14	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-161568-3

Date Collected: 11/02/18 15:45

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:25	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	419614	11/14/18 18:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:18	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		100	419702	11/15/18 10:29	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 15:45	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-161568-4

Date Collected: 11/02/18 11:23

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:37	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	25	419485	11/14/18 04:18	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:29	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	419614	11/14/18 17:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:20	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	419251	11/12/18 14:20	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 11:23	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Date Collected: 11/02/18 10:00

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:40	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	100	419485	11/14/18 04:21	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:33	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:44	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Date Collected: 11/02/18 10:00

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		200	419614	11/14/18 17:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	419251	11/12/18 14:23	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 10:00	CDH	TAL PEN

Client Sample ID: APMW-6

Lab Sample ID: 400-161568-6

Date Collected: 11/02/18 08:45

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:44	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	200	419485	11/14/18 04:25	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:36	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:27	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:25	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	419702	11/15/18 11:07	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 08:45	CDH	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Date Collected: 11/02/18 07:50

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:48	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	25	419485	11/14/18 04:46	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:40	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	419614	11/14/18 17:47	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:27	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	419702	11/15/18 10:16	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Date Collected: 11/02/18 07:50

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	422969	11/02/18 07:50	CDH	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-161568-8

Date Collected: 11/01/18 16:30

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 12:51	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	200	419485	11/14/18 04:50	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:43	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		90	419614	11/14/18 17:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:47	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	419251	11/12/18 14:16	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/01/18 16:30	CDH	TAL PEN

Client Sample ID: APMW-9

Lab Sample ID: 400-161568-9

Date Collected: 11/01/18 15:37

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	100	419485	11/14/18 04:53	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:47	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 15:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		60	419614	11/14/18 17:16	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:49	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	419251	11/12/18 14:16	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/01/18 15:37	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-161568-10

Date Collected: 11/01/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	25	419485	11/14/18 04:57	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:51	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 16:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	419251	11/12/18 14:20	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	422969	11/01/18 14:20	CDH	TAL PEN

Client Sample ID: DUP-01

Lab Sample ID: 400-161568-11

Date Collected: 11/01/18 14:37

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	100	419485	11/14/18 05:01	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:54	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 16:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:16	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:55	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	419251	11/12/18 14:20	RRC	TAL PEN

Client Sample ID: FB-01

Lab Sample ID: 400-161568-12

Date Collected: 11/01/18 16:32

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:11	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 04:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: FB-01

Lab Sample ID: 400-161568-12

Date Collected: 11/01/18 16:32

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020	RA	5	419700	11/14/18 11:53	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 16:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	419614	11/14/18 16:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419253	11/12/18 14:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	419251	11/12/18 13:47	RRC	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-161568-13

Date Collected: 11/02/18 07:45

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	200	419485	11/14/18 05:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 05:58	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 16:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		60	419614	11/14/18 17:28	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 11:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	419702	11/15/18 11:07	RRC	TAL PEN

Client Sample ID: FB-02

Lab Sample ID: 400-161568-14

Date Collected: 11/02/18 10:03

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020		5	419485	11/13/18 13:36	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419485	11/14/18 04:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		419229	11/12/18 13:37	KWN	TAL PEN
Total Recoverable	Analysis	6020	RA	5	419700	11/14/18 11:57	DRE	TAL PEN
Total/NA	Prep	7470A			418938	11/09/18 09:20	JAP	TAL PEN
Total/NA	Analysis	7470A		1	419267	11/12/18 16:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	418659	11/07/18 10:48	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	419614	11/14/18 16:49	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	419842	11/16/18 12:12	BAB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Client Sample ID: FB-02

Lab Sample ID: 400-161568-14

Date Collected: 11/02/18 10:03

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		1	419702	11/15/18 10:23	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Metals

Prep Batch: 418938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	7470A	
400-161568-2	APMW-2	Total/NA	Water	7470A	
400-161568-3	APMW-3	Total/NA	Water	7470A	
400-161568-4	APMW-4	Total/NA	Water	7470A	
400-161568-5	APMW-5	Total/NA	Water	7470A	
400-161568-6	APMW-6	Total/NA	Water	7470A	
400-161568-7	APMW-7	Total/NA	Water	7470A	
400-161568-8	APMW-8	Total/NA	Water	7470A	
400-161568-9	APMW-9	Total/NA	Water	7470A	
400-161568-10	APMW-10	Total/NA	Water	7470A	
400-161568-11	DUP-01	Total/NA	Water	7470A	
400-161568-12	FB-01	Total/NA	Water	7470A	
400-161568-13	DUP-02	Total/NA	Water	7470A	
400-161568-14	FB-02	Total/NA	Water	7470A	
MB 400-418938/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-418938/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-160240-C-47-B MS	Matrix Spike	Dissolved	Water	7470A	
400-160240-C-47-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	

Prep Batch: 419229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-161568-1	APMW-1	Total Recoverable	Water	3005A	
400-161568-1 - RA	APMW-1	Total Recoverable	Water	3005A	
400-161568-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-161568-2	APMW-2	Total Recoverable	Water	3005A	
400-161568-2 - RA	APMW-2	Total Recoverable	Water	3005A	
400-161568-3	APMW-3	Total Recoverable	Water	3005A	
400-161568-3 - RA	APMW-3	Total Recoverable	Water	3005A	
400-161568-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-161568-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-161568-4	APMW-4	Total Recoverable	Water	3005A	
400-161568-4 - RA	APMW-4	Total Recoverable	Water	3005A	
400-161568-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-161568-5 - RA	APMW-5	Total Recoverable	Water	3005A	
400-161568-5	APMW-5	Total Recoverable	Water	3005A	
400-161568-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-161568-6	APMW-6	Total Recoverable	Water	3005A	
400-161568-6 - RA	APMW-6	Total Recoverable	Water	3005A	
400-161568-7 - DL	APMW-7	Total Recoverable	Water	3005A	
400-161568-7 - RA	APMW-7	Total Recoverable	Water	3005A	
400-161568-7	APMW-7	Total Recoverable	Water	3005A	
400-161568-8	APMW-8	Total Recoverable	Water	3005A	
400-161568-8 - RA	APMW-8	Total Recoverable	Water	3005A	
400-161568-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-161568-9 - RA	APMW-9	Total Recoverable	Water	3005A	
400-161568-9	APMW-9	Total Recoverable	Water	3005A	
400-161568-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-161568-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-161568-10 - RA	APMW-10	Total Recoverable	Water	3005A	
400-161568-10	APMW-10	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Metals (Continued)

Prep Batch: 419229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-161568-11 - RA	DUP-01	Total Recoverable	Water	3005A	
400-161568-11	DUP-01	Total Recoverable	Water	3005A	
400-161568-12 - RA	FB-01	Total Recoverable	Water	3005A	
400-161568-12	FB-01	Total Recoverable	Water	3005A	
400-161568-13 - RA	DUP-02	Total Recoverable	Water	3005A	
400-161568-13 - DL	DUP-02	Total Recoverable	Water	3005A	
400-161568-13	DUP-02	Total Recoverable	Water	3005A	
400-161568-14	FB-02	Total Recoverable	Water	3005A	
400-161568-14 - RA	FB-02	Total Recoverable	Water	3005A	
MB 400-419229/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-419229/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-161568-1 MS	APMW-1	Total Recoverable	Water	3005A	
400-161568-1 MSD	APMW-1	Total Recoverable	Water	3005A	

Analysis Batch: 419267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	7470A	418938
400-161568-2	APMW-2	Total/NA	Water	7470A	418938
400-161568-3	APMW-3	Total/NA	Water	7470A	418938
400-161568-4	APMW-4	Total/NA	Water	7470A	418938
400-161568-5	APMW-5	Total/NA	Water	7470A	418938
400-161568-6	APMW-6	Total/NA	Water	7470A	418938
400-161568-7	APMW-7	Total/NA	Water	7470A	418938
400-161568-8	APMW-8	Total/NA	Water	7470A	418938
400-161568-9	APMW-9	Total/NA	Water	7470A	418938
400-161568-10	APMW-10	Total/NA	Water	7470A	418938
400-161568-11	DUP-01	Total/NA	Water	7470A	418938
400-161568-12	FB-01	Total/NA	Water	7470A	418938
400-161568-13	DUP-02	Total/NA	Water	7470A	418938
400-161568-14	FB-02	Total/NA	Water	7470A	418938
MB 400-418938/14-A	Method Blank	Total/NA	Water	7470A	418938
LCS 400-418938/15-A	Lab Control Sample	Total/NA	Water	7470A	418938
400-160240-C-47-B MS	Matrix Spike	Dissolved	Water	7470A	418938
400-160240-C-47-C MSD	Matrix Spike Duplicate	Dissolved	Water	7470A	418938

Analysis Batch: 419485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total Recoverable	Water	6020	419229
400-161568-1 - DL	APMW-1	Total Recoverable	Water	6020	419229
400-161568-2	APMW-2	Total Recoverable	Water	6020	419229
400-161568-2 - DL	APMW-2	Total Recoverable	Water	6020	419229
400-161568-3	APMW-3	Total Recoverable	Water	6020	419229
400-161568-3 - DL	APMW-3	Total Recoverable	Water	6020	419229
400-161568-3 - RA	APMW-3	Total Recoverable	Water	6020	419229
400-161568-4	APMW-4	Total Recoverable	Water	6020	419229
400-161568-4 - DL	APMW-4	Total Recoverable	Water	6020	419229
400-161568-4 - RA	APMW-4	Total Recoverable	Water	6020	419229
400-161568-5	APMW-5	Total Recoverable	Water	6020	419229
400-161568-5 - DL	APMW-5	Total Recoverable	Water	6020	419229
400-161568-5 - RA	APMW-5	Total Recoverable	Water	6020	419229

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 419485 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-6	APMW-6	Total Recoverable	Water	6020	419229
400-161568-6 - DL	APMW-6	Total Recoverable	Water	6020	419229
400-161568-6 - RA	APMW-6	Total Recoverable	Water	6020	419229
400-161568-7	APMW-7	Total Recoverable	Water	6020	419229
400-161568-7 - DL	APMW-7	Total Recoverable	Water	6020	419229
400-161568-7 - RA	APMW-7	Total Recoverable	Water	6020	419229
400-161568-8	APMW-8	Total Recoverable	Water	6020	419229
400-161568-8 - DL	APMW-8	Total Recoverable	Water	6020	419229
400-161568-8 - RA	APMW-8	Total Recoverable	Water	6020	419229
400-161568-9	APMW-9	Total Recoverable	Water	6020	419229
400-161568-9 - DL	APMW-9	Total Recoverable	Water	6020	419229
400-161568-9 - RA	APMW-9	Total Recoverable	Water	6020	419229
400-161568-10	APMW-10	Total Recoverable	Water	6020	419229
400-161568-10 - DL	APMW-10	Total Recoverable	Water	6020	419229
400-161568-10 - RA	APMW-10	Total Recoverable	Water	6020	419229
400-161568-11	DUP-01	Total Recoverable	Water	6020	419229
400-161568-11 - DL	DUP-01	Total Recoverable	Water	6020	419229
400-161568-11 - RA	DUP-01	Total Recoverable	Water	6020	419229
400-161568-12	FB-01	Total Recoverable	Water	6020	419229
400-161568-12 - RA	FB-01	Total Recoverable	Water	6020	419229
400-161568-13	DUP-02	Total Recoverable	Water	6020	419229
400-161568-13 - DL	DUP-02	Total Recoverable	Water	6020	419229
400-161568-13 - RA	DUP-02	Total Recoverable	Water	6020	419229
400-161568-14	FB-02	Total Recoverable	Water	6020	419229
400-161568-14 - RA	FB-02	Total Recoverable	Water	6020	419229
MB 400-419229/1-A ^5	Method Blank	Total Recoverable	Water	6020	419229
LCS 400-419229/2-A	Lab Control Sample	Total Recoverable	Water	6020	419229
400-161568-1 MS	APMW-1	Total Recoverable	Water	6020	419229
400-161568-1 MSD	APMW-1	Total Recoverable	Water	6020	419229

Analysis Batch: 419700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-12 - RA	FB-01	Total Recoverable	Water	6020	419229
400-161568-14 - RA	FB-02	Total Recoverable	Water	6020	419229

Analysis Batch: 420262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1 - RA	APMW-1	Total Recoverable	Water	6020	419229
400-161568-2 - RA	APMW-2	Total Recoverable	Water	6020	419229

General Chemistry

Analysis Batch: 418659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	SM 2540C	
400-161568-2	APMW-2	Total/NA	Water	SM 2540C	
400-161568-3	APMW-3	Total/NA	Water	SM 2540C	
400-161568-4	APMW-4	Total/NA	Water	SM 2540C	
400-161568-5	APMW-5	Total/NA	Water	SM 2540C	
400-161568-6	APMW-6	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 418659 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-7	APMW-7	Total/NA	Water	SM 2540C	
400-161568-8	APMW-8	Total/NA	Water	SM 2540C	
400-161568-9	APMW-9	Total/NA	Water	SM 2540C	
400-161568-10	APMW-10	Total/NA	Water	SM 2540C	
400-161568-11	DUP-01	Total/NA	Water	SM 2540C	
400-161568-12	FB-01	Total/NA	Water	SM 2540C	
400-161568-13	DUP-02	Total/NA	Water	SM 2540C	
400-161568-14	FB-02	Total/NA	Water	SM 2540C	
MB 400-418659/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-418659/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-161568-10 DU	APMW-10	Total/NA	Water	SM 2540C	

Analysis Batch: 419251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-161568-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-161568-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-161568-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-161568-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-161568-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-161568-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-161568-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-161568-12	FB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-419251/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-419251/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-419251/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-161385-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-161385-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-161634-I-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-161634-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 419253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-161568-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-161568-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-161568-10	APMW-10	Total/NA	Water	SM 4500 F C	
400-161568-11	DUP-01	Total/NA	Water	SM 4500 F C	
400-161568-12	FB-01	Total/NA	Water	SM 4500 F C	
MB 400-419253/4	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-419253/2	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-161946-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-161946-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-161946-B-9 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 419614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	SM 4500 CI- E	
400-161568-2	APMW-2	Total/NA	Water	SM 4500 CI- E	
400-161568-3	APMW-3	Total/NA	Water	SM 4500 CI- E	
400-161568-4	APMW-4	Total/NA	Water	SM 4500 CI- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 419614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
400-161568-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-161568-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-161568-8	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-161568-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	
400-161568-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-161568-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-161568-12	FB-01	Total/NA	Water	SM 4500 Cl- E	
400-161568-13	DUP-02	Total/NA	Water	SM 4500 Cl- E	
400-161568-14	FB-02	Total/NA	Water	SM 4500 Cl- E	
MB 400-419614/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-419614/78	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-419614/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-161568-10 MS	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-161568-10 MSD	APMW-10	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 419702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-161568-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-161568-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-161568-13	DUP-02	Total/NA	Water	SM 4500 SO4 E	
400-161568-14	FB-02	Total/NA	Water	SM 4500 SO4 E	
MB 400-419702/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-419702/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-419702/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-161648-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-161648-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 419842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-161568-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-161568-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-161568-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-161568-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-161568-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-161568-13	DUP-02	Total/NA	Water	SM 4500 F C	
400-161568-14	FB-02	Total/NA	Water	SM 4500 F C	
MB 400-419842/4	Method Blank	Total/NA	Water	SM 4500 F C	
400-161624-C-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-161624-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-161898-A-1 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 419858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-419858/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Field Service / Mobile Lab

Analysis Batch: 422969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	Field Sampling	
400-161568-2	APMW-2	Total/NA	Water	Field Sampling	
400-161568-3	APMW-3	Total/NA	Water	Field Sampling	
400-161568-4	APMW-4	Total/NA	Water	Field Sampling	
400-161568-5	APMW-5	Total/NA	Water	Field Sampling	
400-161568-6	APMW-6	Total/NA	Water	Field Sampling	
400-161568-7	APMW-7	Total/NA	Water	Field Sampling	
400-161568-8	APMW-8	Total/NA	Water	Field Sampling	
400-161568-9	APMW-9	Total/NA	Water	Field Sampling	
400-161568-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-419229/1-A ^5
Matrix: Water
Analysis Batch: 419485

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 419229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/12/18 13:37	11/13/18 11:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/12/18 13:37	11/13/18 11:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/12/18 13:37	11/13/18 11:07	5
Boron	<0.021		0.050	0.021	mg/L		11/12/18 13:37	11/13/18 11:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/12/18 13:37	11/13/18 11:07	5
Calcium	<0.13		0.25	0.13	mg/L		11/12/18 13:37	11/13/18 11:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/12/18 13:37	11/13/18 11:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/12/18 13:37	11/13/18 11:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/12/18 13:37	11/13/18 11:07	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		11/12/18 13:37	11/13/18 11:07	5
Selenium	<0.00071		0.0013	0.00071	mg/L		11/12/18 13:37	11/13/18 11:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/12/18 13:37	11/13/18 11:07	5

Lab Sample ID: LCS 400-419229/2-A
Matrix: Water
Analysis Batch: 419485

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 419229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0553		mg/L		111	80 - 120
Arsenic	0.0500	0.0485		mg/L		97	80 - 120
Barium	0.0500	0.0493		mg/L		99	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Cadmium	0.0500	0.0515		mg/L		103	80 - 120
Calcium	5.00	5.18		mg/L		104	80 - 120
Chromium	0.0500	0.0537		mg/L		107	80 - 120
Cobalt	0.0500	0.0537		mg/L		107	80 - 120
Lead	0.0500	0.0521		mg/L		104	80 - 120
Molybdenum	0.0500	0.0517		mg/L		103	80 - 120
Selenium	0.0500	0.0514		mg/L		103	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

Lab Sample ID: 400-161568-1 MS
Matrix: Water
Analysis Batch: 419485

Client Sample ID: APMW-1
Prep Type: Total Recoverable
Prep Batch: 419229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0580		mg/L		116	75 - 125
Arsenic	0.0011	J	0.0500	0.0466		mg/L		91	75 - 125
Barium	0.67		0.0500	0.723	4	mg/L		106	75 - 125
Beryllium	<0.00034	^	0.0500	0.0527	^	mg/L		105	75 - 125
Boron	3.4	E	0.100	3.49	E 4	mg/L		96	75 - 125
Cadmium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125
Calcium	230	E	5.00	240	E 4	mg/L		202	75 - 125
Chromium	<0.0011		0.0500	0.0483		mg/L		97	75 - 125
Cobalt	<0.00040		0.0500	0.0471		mg/L		94	75 - 125
Lead	0.00035	J	0.0500	0.0555		mg/L		110	75 - 125
Lithium	0.0068	^	0.0500	0.0657	^	mg/L		118	75 - 125
Molybdenum	<0.0020		0.0500	0.0482		mg/L		96	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-161568-1 MS
Matrix: Water
Analysis Batch: 419485

Client Sample ID: APMW-1
Prep Type: Total Recoverable
Prep Batch: 419229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	<0.00071	F1	0.0500	0.0137	F1	mg/L		27	75 - 125
Thallium	<0.000085		0.0100	0.0107		mg/L		107	75 - 125

Lab Sample ID: 400-161568-1 MSD
Matrix: Water
Analysis Batch: 419485

Client Sample ID: APMW-1
Prep Type: Total Recoverable
Prep Batch: 419229

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0581		mg/L		116	75 - 125	0	20
Arsenic	0.0011	J	0.0500	0.0471		mg/L		92	75 - 125	1	20
Barium	0.67		0.0500	0.728	4	mg/L		114	75 - 125	1	20
Beryllium	<0.00034	^	0.0500	0.0509	^	mg/L		102	75 - 125	4	20
Boron	3.4	E	0.100	3.55	E 4	mg/L		156	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0528		mg/L		106	75 - 125	5	20
Calcium	230	E	5.00	244	E 4	mg/L		286	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0483		mg/L		97	75 - 125	0	20
Cobalt	<0.00040		0.0500	0.0472		mg/L		94	75 - 125	0	20
Lead	0.00035	J	0.0500	0.0560		mg/L		111	75 - 125	1	20
Lithium	0.0068	^	0.0500	0.0633	^	mg/L		113	75 - 125	4	20
Molybdenum	<0.0020		0.0500	0.0477		mg/L		95	75 - 125	1	20
Selenium	<0.00071	F1	0.0500	0.0129	F1	mg/L		26	75 - 125	6	20
Thallium	<0.000085		0.0100	0.0107		mg/L		107	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-418938/14-A
Matrix: Water
Analysis Batch: 419267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/09/18 09:02	11/12/18 14:56	1

Lab Sample ID: LCS 400-418938/15-A
Matrix: Water
Analysis Batch: 419267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000899		mg/L		89	80 - 120

Lab Sample ID: 400-160240-C-47-B MS
Matrix: Water
Analysis Batch: 419267

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 418938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00012	J	0.00201	0.00191		mg/L		89	80 - 120

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-160240-C-47-C MSD
Matrix: Water
Analysis Batch: 419267

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 418938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00012	J	0.00201	0.00185		mg/L		86	80 - 120	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-418659/1
Matrix: Water
Analysis Batch: 418659

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			11/07/18 10:48	1

Lab Sample ID: LCS 400-418659/2
Matrix: Water
Analysis Batch: 418659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	244		mg/L		83	78 - 122

Lab Sample ID: 400-161568-10 DU
Matrix: Water
Analysis Batch: 418659

Client Sample ID: APMW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2700		2650		mg/L		1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-419614/6
Matrix: Water
Analysis Batch: 419614

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			11/14/18 16:39	1

Lab Sample ID: LCS 400-419614/78
Matrix: Water
Analysis Batch: 419614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.3		mg/L		104	90 - 110

Lab Sample ID: MRL 400-419614/3
Matrix: Water
Analysis Batch: 419614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.61	J	mg/L		80	50 - 150

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-161568-10 MS
Matrix: Water
Analysis Batch: 419614

Client Sample ID: APMW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1300		10.2	1280	4	mg/L		-339	73 - 120

Lab Sample ID: 400-161568-10 MSD
Matrix: Water
Analysis Batch: 419614

Client Sample ID: APMW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1300		10.2	1300	4	mg/L		-194	73 - 120	1	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-419253/4
Matrix: Water
Analysis Batch: 419253

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			11/12/18 13:34	1

Lab Sample ID: LCS 400-419253/2
Matrix: Water
Analysis Batch: 419253

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.34		mg/L		109	90 - 110

Lab Sample ID: 400-161946-B-1 MS
Matrix: Water
Analysis Batch: 419253

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	<0.032		1.00	1.16		mg/L		116	75 - 125

Lab Sample ID: 400-161946-B-1 MSD
Matrix: Water
Analysis Batch: 419253

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	<0.032		1.00	1.16		mg/L		116	75 - 125	0	4

Lab Sample ID: 400-161946-B-9 DU
Matrix: Water
Analysis Batch: 419253

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MB 400-419842/4
Matrix: Water
Analysis Batch: 419842

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			11/16/18 10:57	1

Lab Sample ID: 400-161624-C-1 MS
Matrix: Water
Analysis Batch: 419842

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.0	F1	1.00	1.66	F1	mg/L		66	75 - 125

Lab Sample ID: 400-161624-C-1 MSD
Matrix: Water
Analysis Batch: 419842

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	1.0	F1	1.00	1.66	F1	mg/L		66	75 - 125	0	4

Lab Sample ID: 400-161898-A-1 DU
Matrix: Water
Analysis Batch: 419842

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	2.3		2.34		mg/L		2	4

Lab Sample ID: LCS 400-419858/4
Matrix: Water
Analysis Batch: 419858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	4.34		mg/L		109	90 - 110

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-419251/6
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			11/12/18 13:36	1

Lab Sample ID: LCS 400-419251/7
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.9		mg/L		99	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-419251/3
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.49	J	mg/L		90	50 - 150

Lab Sample ID: 400-161385-A-1 MS
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	40	F2	10.0	45.9	4	mg/L		57	77 - 128

Lab Sample ID: 400-161385-A-1 MSD
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	40	F2	10.0	49.5	4 F2	mg/L		94	77 - 128	8	5

Lab Sample ID: 400-161634-I-1 MS
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	6.3	F1 F2	10.0	5.63	F1	mg/L		-7	77 - 128

Lab Sample ID: 400-161634-I-1 MSD
Matrix: Water
Analysis Batch: 419251

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	6.3	F1 F2	10.0	5.99	F1 F2	mg/L		-3	77 - 128	6	5

Lab Sample ID: MB 400-419702/6
Matrix: Water
Analysis Batch: 419702

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			11/15/18 10:16	1

Lab Sample ID: LCS 400-419702/7
Matrix: Water
Analysis Batch: 419702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.9		mg/L		99	90 - 110

Lab Sample ID: MRL 400-419702/3
Matrix: Water
Analysis Batch: 419702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.07	J	mg/L		81	50 - 150

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
 SDG: Ash Pond

Lab Sample ID: 400-161648-A-1 MS
Matrix: Water
Analysis Batch: 419702

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	21		10.0	29.8		mg/L		86	77 - 128

Lab Sample ID: 400-161648-A-1 MSD
Matrix: Water
Analysis Batch: 419702


Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	21		10.0	29.1		mg/L		79	77 - 128	2	5

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Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-73764-29084.1	
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2	
Company: Southern Company		Due Date Requested:		Job #:	
Address: PO BOX 2641 GSC8		TAT Requested (days):		Preservation Codes:	
City: Birmingham		PO #: SCS10347656		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
State/Zip: AL, 35291		WO #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone: 205-992-7762(Tel)		Project #: 40009375		Special Instructions/Note:	
Email: CBSSELLER@SOUTHERNCO.COM		SSOWH:		Total Number of Containers	
Project Name: CCR - Plant Watson		Site: Ash Pond			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, AS=Air)
APMW-1		11/2/18	1420	G	Water
APMW-2			1210		Water
APMW-3			1545		Water
APMW-4			1123		Water
APMW-5			1000		Water
APMW-6			0945		Water
APMW-7		11/2/18	0750		Water
APMW-8		11/1/18	1630		Water
APMW-9		11/1/18	1537		Water
APMW-10		11/1/18	1420		Water
Duplicate 1			1437	G	Water



400-161568 COC

<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	Special Instructions/QC Requirements:
--	---------------------------------------

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Relinquished by: <i>[Signature]</i> Date/Time: 11/3/18 1005 Company: <i>[Signature]</i>	Relinquished by: <i>[Signature]</i> Date/Time: _____ Company: _____
Relinquished by: _____ Date/Time: _____ Company: _____	Relinquished by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: *2.69*

Custody Seal No.: *0102*

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-161568-1

SDG Number: Ash Pond

Login Number: 161568

List Number: 1

Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C 0.0°C 2.6°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-161568-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

12/11/2018 1:25:57 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Job ID: 400-161568-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-161568-2

RAD

Method(s) 9315: Ra-226 Prep Batch 160-400071. The barium recovery is above the 110% QC limit for the LCSD (Laboratory Control Sample Duplicate) at 113%. The LCS/LCSD spike recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation, isolated to the LCSD, which is not indicative of the entire batch. The data have been reported with this narrative. APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), FB-01 (400-161568-12), DUP-02 (400-161568-13), FB-02 (400-161568-14), (LCS 160-400071/1-A), (LCSD 160-400071/2-A) and (MB 160-400071/17-A)

Method(s) 9320: Ra-228 Prep Batch 160-400074. The barium recovery is above the 110% QC limit for the LCSD (Laboratory Control Sample Duplicate) at 113%. The LCS/LCSD spike recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation, isolated to the LCS, which is not indicative of the entire batch. The data have been reported with this narrative. APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), FB-01 (400-161568-12), DUP-02 (400-161568-13), FB-02 (400-161568-14), (LCS 160-400074/1-A), (LCSD 160-400074/2-A) and (MB 160-400074/17-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-400074: The following samples were prepared at a reduced aliquot due to potential matrix interference. Samples were reduced due to strong odor similar to that of sulfur. APMW-1 (400-161568-1) and APMW-7 (400-161568-7).

Method(s) PrecSep_0: Radium 228 Prep Batch 160-400074: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), FB-01 (400-161568-12), DUP-02 (400-161568-13) and FB-02 (400-161568-14). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-400071: The following samples were prepared at a reduced aliquot due to potential matrix interference. Samples were reduced due to strong odor similar to that of sulfur. APMW-1 (400-161568-1) and APMW-7 (400-161568-7).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-400071: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: APMW-1 (400-161568-1), APMW-2 (400-161568-2), APMW-3 (400-161568-3), APMW-4 (400-161568-4), APMW-5 (400-161568-5), APMW-6 (400-161568-6), APMW-7 (400-161568-7), APMW-8 (400-161568-8), APMW-9 (400-161568-9), APMW-10 (400-161568-10), DUP-01 (400-161568-11), FB-01 (400-161568-12), DUP-02 (400-161568-13) and FB-02 (400-161568-14). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-161568-1	APMW-1	Water	11/02/18 14:20	11/03/18 10:05
400-161568-2	APMW-2	Water	11/02/18 12:10	11/03/18 10:05
400-161568-3	APMW-3	Water	11/02/18 15:45	11/03/18 10:05
400-161568-4	APMW-4	Water	11/02/18 11:23	11/03/18 10:05
400-161568-5	APMW-5	Water	11/02/18 10:00	11/03/18 10:05
400-161568-6	APMW-6	Water	11/02/18 08:45	11/03/18 10:05
400-161568-7	APMW-7	Water	11/02/18 07:50	11/03/18 10:05
400-161568-8	APMW-8	Water	11/01/18 16:30	11/03/18 10:05
400-161568-9	APMW-9	Water	11/01/18 15:37	11/03/18 10:05
400-161568-10	APMW-10	Water	11/01/18 14:20	11/03/18 10:05
400-161568-11	DUP-01	Water	11/01/18 14:37	11/03/18 10:05
400-161568-12	FB-01	Water	11/01/18 16:32	11/03/18 10:05
400-161568-13	DUP-02	Water	11/02/18 07:45	11/03/18 10:05
400-161568-14	FB-02	Water	11/02/18 10:03	11/03/18 10:05

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-161568-1

Date Collected: 11/02/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.58		0.340	0.412	1.00	0.148	pCi/L	11/09/18 08:38	12/03/18 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 08:38	12/03/18 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.97		0.454	0.530	1.00	0.422	pCi/L	11/09/18 09:13	11/28/18 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 09:13	11/28/18 11:22	1
Y Carrier	86.0		40 - 110					11/09/18 09:13	11/28/18 11:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.55		0.567	0.671	5.00	0.422	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-161568-2

Date Collected: 11/02/18 12:10

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	11.1		0.606	1.17	1.00	0.111	pCi/L	11/09/18 08:38	12/03/18 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					11/09/18 08:38	12/03/18 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.33		0.535	0.791	1.00	0.386	pCi/L	11/09/18 09:13	11/28/18 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					11/09/18 09:13	11/28/18 11:22	1
Y Carrier	86.7		40 - 110					11/09/18 09:13	11/28/18 11:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	17.4		0.808	1.41	5.00	0.386	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-161568-3

Date Collected: 11/02/18 15:45

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.551		0.141	0.150	1.00	0.104	pCi/L	11/09/18 08:38	12/03/18 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 08:38	12/03/18 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.47		0.495	0.705	1.00	0.329	pCi/L	11/09/18 09:13	11/28/18 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 09:13	11/28/18 11:22	1
Y Carrier	84.9		40 - 110					11/09/18 09:13	11/28/18 11:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.02		0.515	0.721	5.00	0.329	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-161568-4

Date Collected: 11/02/18 11:23

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.809		0.170	0.185	1.00	0.111	pCi/L	11/09/18 08:38	12/03/18 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 08:38	12/03/18 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.13		0.295	0.313	1.00	0.364	pCi/L	11/09/18 09:13	11/28/18 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 09:13	11/28/18 11:22	1
Y Carrier	82.6		40 - 110					11/09/18 09:13	11/28/18 11:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.94		0.340	0.364	5.00	0.364	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Date Collected: 11/02/18 10:00

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.637		0.155	0.165	1.00	0.102	pCi/L	11/09/18 08:38	12/03/18 07:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					11/09/18 08:38	12/03/18 07:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.36		0.429	0.528	1.00	0.378	pCi/L	11/09/18 09:13	11/28/18 11:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					11/09/18 09:13	11/28/18 11:22	1
Y Carrier	81.9		40 - 110					11/09/18 09:13	11/28/18 11:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.00		0.456	0.553	5.00	0.378	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-161568-6

Date Collected: 11/02/18 08:45

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.707		0.154	0.167	1.00	0.106	pCi/L	11/09/18 08:38	12/03/18 07:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 08:38	12/03/18 07:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.18		0.305	0.324	1.00	0.384	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	83.7		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.89		0.342	0.365	5.00	0.384	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Date Collected: 11/02/18 07:50

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.13		0.302	0.358	1.00	0.118	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.74		0.510	0.615	1.00	0.460	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	84.1		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.87		0.593	0.712	5.00	0.460	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-161568-8

Date Collected: 11/01/18 16:30

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.716		0.160	0.173	1.00	0.106	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.65		0.389	0.459	1.00	0.374	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	84.1		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.37		0.421	0.491	5.00	0.374	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-161568-9

Date Collected: 11/01/18 15:37

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.11		0.266	0.327	1.00	0.0851	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.56		0.478	0.636	1.00	0.377	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	84.9		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.67		0.547	0.715	5.00	0.377	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-161568-10

Date Collected: 11/01/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.08		0.196	0.218	1.00	0.0966	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.11		0.335	0.350	1.00	0.455	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	85.2		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.19		0.388	0.412	5.00	0.455	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 11/01/18 14:37
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.96		0.252	0.308	1.00	0.107	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.57		0.505	0.657	1.00	0.447	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	80.7		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.53		0.564	0.726	5.00	0.447	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 11/01/18 16:32
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-12
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0353	U	0.0571	0.0572	1.00	0.0997	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.250	U	0.219	0.220	1.00	0.426	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	81.1		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.214	U	0.226	0.227	5.00	0.426	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 11/02/18 07:45
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-13
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.593		0.144	0.154	1.00	0.102	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.62		0.318	0.351	1.00	0.356	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	87.5		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.21		0.349	0.383	5.00	0.356	pCi/L		12/11/18 09:56	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: FB-02
Date Collected: 11/02/18 10:03
Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-14
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0662	U	0.0637	0.0640	1.00	0.0969	pCi/L	11/09/18 08:38	12/03/18 07:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 08:38	12/03/18 07:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.235	U	0.202	0.203	1.00	0.396	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	87.9		40 - 110					11/09/18 09:13	11/28/18 11:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.169	U	0.212	0.213	5.00	0.396	pCi/L		12/11/18 09:56	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 11/02/18 14:20

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403831	12/03/18 07:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:22	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-2

Date Collected: 11/02/18 12:10

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403831	12/03/18 07:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:22	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-3

Date Collected: 11/02/18 15:45

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403831	12/03/18 07:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:22	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-4

Date Collected: 11/02/18 11:23

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403831	12/03/18 07:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:22	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-161568-5

Date Collected: 11/02/18 10:00

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403831	12/03/18 07:14	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:22	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-161568-6

Date Collected: 11/02/18 08:45

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:15	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-161568-7

Date Collected: 11/02/18 07:50

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-161568-8

Date Collected: 11/01/18 16:30

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-161568-9

Date Collected: 11/01/18 15:37

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-161568-10

Date Collected: 11/01/18 14:20

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-161568-11

Date Collected: 11/01/18 14:37

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: FB-01

Lab Sample ID: 400-161568-12

Date Collected: 11/01/18 16:32

Matrix: Water

Date Received: 11/03/18 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Client Sample ID: DUP-02

Date Collected: 11/02/18 07:45

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Client Sample ID: FB-02

Date Collected: 11/02/18 10:03

Date Received: 11/03/18 10:05

Lab Sample ID: 400-161568-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			400071	11/09/18 08:38	JLC	TAL SL
Total/NA	Analysis	9315		1	403832	12/03/18 07:16	CDR	TAL SL
Total/NA	Prep	PrecSep_0			400074	11/09/18 09:13	JLC	TAL SL
Total/NA	Analysis	9320		1	403058	11/28/18 11:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	404952	12/11/18 09:56	RTM	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
 SDG: Ash Pond

Rad

Prep Batch: 400071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	PrecSep-21	
400-161568-2	APMW-2	Total/NA	Water	PrecSep-21	
400-161568-3	APMW-3	Total/NA	Water	PrecSep-21	
400-161568-4	APMW-4	Total/NA	Water	PrecSep-21	
400-161568-5	APMW-5	Total/NA	Water	PrecSep-21	
400-161568-6	APMW-6	Total/NA	Water	PrecSep-21	
400-161568-7	APMW-7	Total/NA	Water	PrecSep-21	
400-161568-8	APMW-8	Total/NA	Water	PrecSep-21	
400-161568-9	APMW-9	Total/NA	Water	PrecSep-21	
400-161568-10	APMW-10	Total/NA	Water	PrecSep-21	
400-161568-11	DUP-01	Total/NA	Water	PrecSep-21	
400-161568-12	FB-01	Total/NA	Water	PrecSep-21	
400-161568-13	DUP-02	Total/NA	Water	PrecSep-21	
400-161568-14	FB-02	Total/NA	Water	PrecSep-21	
MB 160-400071/17-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-400071/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-400071/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 400074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-161568-1	APMW-1	Total/NA	Water	PrecSep_0	
400-161568-2	APMW-2	Total/NA	Water	PrecSep_0	
400-161568-3	APMW-3	Total/NA	Water	PrecSep_0	
400-161568-4	APMW-4	Total/NA	Water	PrecSep_0	
400-161568-5	APMW-5	Total/NA	Water	PrecSep_0	
400-161568-6	APMW-6	Total/NA	Water	PrecSep_0	
400-161568-7	APMW-7	Total/NA	Water	PrecSep_0	
400-161568-8	APMW-8	Total/NA	Water	PrecSep_0	
400-161568-9	APMW-9	Total/NA	Water	PrecSep_0	
400-161568-10	APMW-10	Total/NA	Water	PrecSep_0	
400-161568-11	DUP-01	Total/NA	Water	PrecSep_0	
400-161568-12	FB-01	Total/NA	Water	PrecSep_0	
400-161568-13	DUP-02	Total/NA	Water	PrecSep_0	
400-161568-14	FB-02	Total/NA	Water	PrecSep_0	
MB 160-400074/17-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-400074/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-400074/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-400071/17-A
Matrix: Water
Analysis Batch: 403832

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 400071

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03398	U	0.0516	0.0516	1.00	0.0891	pCi/L	11/09/18 08:38	12/03/18 07:17	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					11/09/18 08:38	12/03/18 07:17	1

Lab Sample ID: LCS 160-400071/1-A
Matrix: Water
Analysis Batch: 403831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 400071

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.456		1.02	1.00	0.111	pCi/L	83	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-400071/2-A
Matrix: Water
Analysis Batch: 403831

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 400071

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.4	9.124		0.981	1.00	0.107	pCi/L	80	68 - 137	0.17	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	113	X	40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-400074/17-A
Matrix: Water
Analysis Batch: 403058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 400074

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.04322	U	0.195	0.195	1.00	0.356	pCi/L	11/09/18 09:13	11/28/18 11:23	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					11/09/18 09:13	11/28/18 11:23	1
Y Carrier	84.9		40 - 110					11/09/18 09:13	11/28/18 11:23	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-400074/1-A
Matrix: Water
Analysis Batch: 403058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 400074

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.18	7.834		0.944	1.00	0.374	pCi/L	85	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	81.9		40 - 110

Lab Sample ID: LCSD 160-400074/2-A
Matrix: Water
Analysis Batch: 403058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 400074

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.18	7.239		0.861	1.00	0.304	pCi/L	79	56 - 140	0.33	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	113	X	40 - 110
Y Carrier	84.1		40 - 110

Chain of Custody Record

Client Information		Lab PM: Whitmire, Cheyenne R		Carrier Tracking No(s): 400-73764-29084.1	
Client Contact: Mr. Cale Sellers		E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2	
Company: Southern Company		Due Date Requested:		Job #:	
Address: PO BOX 2641 GSC8		TAT Requested (days):		Preservation Codes:	
City: Birmingham		PO #: SCS10347656		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State Zip: AL, 35291		WO #:		Other:	
Phone: 205-992-7762(Tel)		Project #: 40009375		Total Number of Containers	
Email: CBSSELLER@SOUTHERNCO.COM		SSOW#:		Special Instructions/Note:	
Project Name: CCR - Plant Watson		Site: Ash Pond			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, AsAb)
APMW-1	11/2/18	1420	G	Water	
APMW-2		1210		Water	
APMW-3		1545		Water	
APMW-4		1123		Water	
APMW-5		1000		Water	
APMW-6		0945		Water	
APMW-7	11/2/18	0750		Water	
APMW-8	11/1/18	1630		Water	
APMW-9	11/1/18	1537		Water	
APMW-10	11/1/18	1420		Water	
Duplicate 1		11/1/18	1437	G	Water
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:		Date/Time:		Method of Shipment:	
Relinquished by: [Signature]		11/3/18 1005		Company: [Signature]	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.692 0.02	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months					
Special Instructions/QC Requirements:					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-161568-2

SDG Number: Ash Pond

Login Number: 161568

List Number: 1

Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C 0.0°C 2.6°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-161568-2

SDG Number: Ash Pond

Login Number: 161568

List Number: 2

Creator: Hellm, Michael

List Source: TestAmerica St. Louis

List Creation: 11/08/18 11:14 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-18 *
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-18 *
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	90125	12-31-18
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA180017	12-31-18 *
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-161568-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-163233-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

12/31/2018 8:14:05 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Job ID: 400-163233-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-163233-1

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 423552 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: APMW-1 (400-163233-1), APMW-2 (400-163233-2), APMW-3 (400-163233-3), APMW-4 (400-163233-4), APMW-5 (400-163233-5), APMW-6 (400-163233-6), APMW-7 (400-163233-7), APMW-8 (400-163233-8), APMW-9 (400-163233-9), APMW-10 (400-163233-10), DUP-01 (400-163233-11) and DUP-02 (400-163233-12).

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-163233-1), APMW-2 (400-163233-2), APMW-3 (400-163233-3), APMW-4 (400-163233-4), APMW-5 (400-163233-5), APMW-6 (400-163233-6), APMW-8 (400-163233-8), APMW-9 (400-163233-9), APMW-10 (400-163233-10), DUP-01 (400-163233-11) and DUP-02 (400-163233-12). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 422576 and analytical batch 422912 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

General Chemistry

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163221-I-2 MS) and (400-163221-I-2 MSD)

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 424299 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-163233-1), APMW-2 (400-163233-2), APMW-3 (400-163233-3), APMW-4 (400-163233-4), APMW-5 (400-163233-5), APMW-6 (400-163233-6), APMW-7 (400-163233-7), APMW-8 (400-163233-8), APMW-9 (400-163233-9), APMW-10 (400-163233-10), DUP-01 (400-163233-11), (400-163221-I-2), (400-163221-I-2 MS), (400-163221-I-2 MSD), DUP-02 (400-163233-12), (400-163469-A-1), (400-163469-A-1 MS) and (400-163469-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163469-A-1 MS) and (400-163469-A-1 MSD)

Method(s) SM 4500 Cl- E: The matrix spike duplicate (MSD) recoveries for analytical batch 424317 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-3 (400-163233-3), APMW-4 (400-163233-4), APMW-5 (400-163233-5), APMW-6 (400-163233-6), APMW-7 (400-163233-7), APMW-8 (400-163233-8), APMW-9 (400-163233-9), APMW-10 (400-163233-10), DUP-01 (400-163233-11) and FB-01 (400-163233-13). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. The MS/MSD was spiked after the manual dilution. (400-163299-J-8 MS) and (400-163299-J-8 MSD)

Method(s) SM 4500 SO4 E: The matrix spike (MS) recoveries for analytical batch 424245 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: (400-163299-J-8), (400-163299-J-8 MS) and (400-163299-J-8 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-163233-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.47		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.70		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium	0.0016	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Selenium	0.0012	J	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Calcium - DL	270		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	3300		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1300		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.060	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	33		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.01				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-163233-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	3.3		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.022		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	3.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	330		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	5300		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2700		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	4.3		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Field pH	5.98				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-163233-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.063		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.072		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.062		0.015	0.0020	mg/L	5		6020	Total Recoverable
Selenium	0.0011	J	0.0013	0.00071	mg/L	5		6020	Total Recoverable
Boron - DL	4.8		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	13000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	12000		600	420	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	0.64		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1100		250	70	mg/L	50		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-163233-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.55				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-163233-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.43		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.054		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0093	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	1.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	190		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	7400		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4000		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.51		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.43				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-163233-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.23		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lead	0.00041	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.044		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.069		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	5.7		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	330		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	14000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	9000		600	420	mg/L	300		SM 4500 Cl- E	Total/NA
Fluoride	1.4		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	990		250	70	mg/L	50		SM 4500 SO4 E	Total/NA
Field pH	6.42				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-163233-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-6 (Continued)

Lab Sample ID: 400-163233-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.52		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00090	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.00070	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.024		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	14		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	190		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.4		0.30	0.040	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4600		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.98		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	400		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	7.1				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-163233-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.70		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.1		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	94		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0062	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	6900		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4300		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	65		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.4				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-163233-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.079		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.22		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lead	0.0013		0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.082		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.14		0.015	0.0020	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-8 (Continued)

Lab Sample ID: 400-163233-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	20		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	490		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	8300		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3700		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.98		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	660		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.75				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-163233-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.44		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lead	0.00039	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Boron - DL	6.4		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	6000		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3100		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.21		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	300		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.25				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-163233-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	65		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00060	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.10		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	1.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	2600		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1300		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.75		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	290		50	14	mg/L	10		SM 4500 SO4 E	Total/NA
Field pH	6.89				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-163233-11

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: DUP-01 (Continued)

Lab Sample ID: 400-163233-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.45		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron - DL	6.5		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	6300		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3300		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		50	14	mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: DUP-02

Lab Sample ID: 400-163233-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	3.3		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.020		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	3.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	340		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	5700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2900		180	130	mg/L	90		SM 4500 Cl- E	Total/NA
Fluoride	0.040	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-163233-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163233-1	APMW-1	Water	12/07/18 08:23	12/07/18 11:30
400-163233-2	APMW-2	Water	12/07/18 07:34	12/07/18 11:30
400-163233-3	APMW-3	Water	12/07/18 06:49	12/07/18 11:30
400-163233-4	APMW-4	Water	12/06/18 16:24	12/07/18 11:30
400-163233-5	APMW-5	Water	12/06/18 15:06	12/07/18 11:30
400-163233-6	APMW-6	Water	12/06/18 14:16	12/07/18 11:30
400-163233-7	APMW-7	Water	12/06/18 13:19	12/07/18 11:30
400-163233-8	APMW-8	Water	12/06/18 12:10	12/07/18 11:30
400-163233-9	APMW-9	Water	12/06/18 11:01	12/07/18 11:30
400-163233-10	APMW-10	Water	12/06/18 10:05	12/07/18 11:30
400-163233-11	DUP-01	Water	12/06/18 10:01	12/07/18 11:30
400-163233-12	DUP-02	Water	12/07/18 06:34	12/07/18 11:30
400-163233-13	FB-01	Water	12/07/18 08:45	12/07/18 11:30

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-163233-1

Date Collected: 12/07/18 08:23

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:04	5
Barium	0.47		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:04	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:04	5
Boron	0.70		0.050	0.021	mg/L		12/12/18 17:32	12/13/18 18:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:04	5
Lithium	0.0016	J	0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:04	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:04	5
Selenium	0.0012	J	0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:04	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270		1.3	0.63	mg/L		12/12/18 17:32	12/17/18 18:34	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070	F1	0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		25	17	mg/L			12/11/18 16:12	1
Chloride	1300		180	130	mg/L			12/21/18 18:10	90
Fluoride	0.060	J	0.10	0.032	mg/L			12/20/18 14:22	1
Sulfate	33		5.0	1.4	mg/L			12/21/18 08:41	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.01				SU			12/07/18 08:23	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-163233-2

Date Collected: 12/07/18 07:34

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:08	5
Barium	3.3		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:08	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:08	5
Lithium	0.022		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:08	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:08	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:08	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.9		0.25	0.11	mg/L		12/12/18 17:32	12/17/18 18:37	25
Calcium	330		1.3	0.63	mg/L		12/12/18 17:32	12/17/18 18:37	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5300		50	34	mg/L			12/11/18 16:12	1
Chloride	2700		180	130	mg/L			12/21/18 18:14	90
Fluoride	4.3		0.10	0.032	mg/L			12/20/18 14:43	1
Sulfate	<1.4		5.0	1.4	mg/L			12/21/18 11:49	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.98				SU			12/07/18 07:34	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-163233-3

Date Collected: 12/07/18 06:49

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:30	5
Arsenic	0.063		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:30	5
Barium	0.11		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:30	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:30	5
Cobalt	0.0028		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:30	5
Lithium	0.072		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:30	5
Molybdenum	0.062		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:30	5
Selenium	0.0011	J	0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:30	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.8		0.50	0.21	mg/L		12/12/18 17:32	12/17/18 18:41	50
Calcium	320		2.5	1.3	mg/L		12/12/18 17:32	12/17/18 18:41	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 13:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	13000		1000	680	mg/L			12/11/18 16:12	1
Chloride	12000		600	420	mg/L			12/21/18 17:52	300
Fluoride	0.64		0.10	0.032	mg/L			12/20/18 14:57	1
Sulfate	1100		250	70	mg/L			12/21/18 08:30	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.55				SU			12/07/18 06:49	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-4
Date Collected: 12/06/18 16:24
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:33	5
Arsenic	0.018		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:33	5
Barium	0.43		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:33	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:33	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:33	5
Cobalt	0.0032		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:33	5
Lithium	0.054		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:33	5
Molybdenum	0.0093	J	0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:33	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:33	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.25	0.11	mg/L		12/12/18 17:32	12/17/18 18:45	25
Calcium	190		1.3	0.63	mg/L		12/12/18 17:32	12/17/18 18:45	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7400		130	85	mg/L			12/11/18 16:12	1
Chloride	4000		200	140	mg/L			12/21/18 17:00	100
Fluoride	0.51		0.10	0.032	mg/L			12/20/18 14:30	1
Sulfate	300		100	28	mg/L			12/21/18 08:22	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.43				SU			12/06/18 16:24	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-163233-5

Date Collected: 12/06/18 15:06

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:37	5
Arsenic	0.23		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:37	5
Barium	0.10		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:37	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:37	5
Lead	0.00041	J	0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:37	5
Lithium	0.044		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:37	5
Molybdenum	0.069		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:37	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:37	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.7		0.50	0.21	mg/L		12/12/18 17:32	12/17/18 18:48	50
Calcium	330		2.5	1.3	mg/L		12/12/18 17:32	12/17/18 18:48	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	14000		1000	680	mg/L			12/11/18 16:12	1
Chloride	9000		600	420	mg/L			12/21/18 17:19	300
Fluoride	1.4		0.10	0.032	mg/L			12/20/18 14:53	1
Sulfate	990		250	70	mg/L			12/21/18 08:26	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.42				SU			12/06/18 15:06	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-163233-6

Date Collected: 12/06/18 14:16

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:41	5
Arsenic	0.52		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:41	5
Barium	0.24		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:41	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:41	5
Cadmium	0.00090	J	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:41	5
Cobalt	0.00070	J	0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:41	5
Lithium	0.024		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:41	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:41	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14		1.0	0.42	mg/L		12/12/18 17:32	12/17/18 19:10	100
Calcium	190		5.0	2.5	mg/L		12/12/18 17:32	12/17/18 19:10	100
Molybdenum	1.4		0.30	0.040	mg/L		12/12/18 17:32	12/17/18 19:10	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4600		50	34	mg/L			12/11/18 16:12	1
Chloride	2300		200	140	mg/L			12/21/18 17:00	100
Fluoride	0.98		0.10	0.032	mg/L			12/20/18 14:59	1
Sulfate	400		100	28	mg/L			12/21/18 08:26	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.1				SU			12/06/18 14:16	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-163233-7

Date Collected: 12/06/18 13:19

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:44	5
Arsenic	0.0033		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:44	5
Barium	0.70		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:44	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:44	5
Boron	1.1		0.050	0.021	mg/L		12/12/18 17:32	12/13/18 18:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:44	5
Calcium	94		0.25	0.13	mg/L		12/12/18 17:32	12/13/18 18:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:44	5
Lithium	<0.0011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:44	5
Molybdenum	0.0062	J	0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:44	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6900		130	85	mg/L			12/11/18 16:12	1
Chloride	4300		200	140	mg/L			12/21/18 17:00	100
Fluoride	0.13		0.10	0.032	mg/L			12/20/18 15:03	1
Sulfate	65		25	7.0	mg/L			12/21/18 08:22	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.4				SU			12/06/18 13:19	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-163233-8

Date Collected: 12/06/18 12:10

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:48	5
Arsenic	0.079		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:48	5
Barium	0.22		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:48	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:48	5
Lead	0.0013		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:48	5
Lithium	0.082		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:48	5
Molybdenum	0.14		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:48	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:48	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	20		2.0	0.84	mg/L		12/12/18 17:32	12/17/18 19:13	200
Calcium	490		10	5.0	mg/L		12/12/18 17:32	12/17/18 19:13	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8300		130	85	mg/L			12/11/18 16:12	1
Chloride	3700		200	140	mg/L			12/21/18 17:00	100
Fluoride	0.98		0.10	0.032	mg/L			12/20/18 15:05	1
Sulfate	660		100	28	mg/L			12/21/18 08:26	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.75				SU			12/06/18 12:10	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-163233-9

Date Collected: 12/06/18 11:01

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:52	5
Arsenic	0.0016		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:52	5
Barium	0.44		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:52	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:52	5
Lead	0.00039	J	0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:52	5
Lithium	<0.0011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:52	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:52	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:52	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.4		0.50	0.21	mg/L		12/12/18 17:32	12/17/18 19:17	50
Calcium	310		2.5	1.3	mg/L		12/12/18 17:32	12/17/18 19:17	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6000		50	34	mg/L			12/11/18 16:12	1
Chloride	3100		200	140	mg/L			12/21/18 17:00	100
Fluoride	0.21		0.10	0.032	mg/L			12/20/18 16:21	1
Sulfate	300		50	14	mg/L			12/21/18 07:52	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.25				SU			12/06/18 11:01	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-163233-10

Date Collected: 12/06/18 10:05

Matrix: Water

Date Received: 12/07/18 11:30

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:55	5
Arsenic	0.12		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:55	5
Barium	0.24		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:55	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:55	5
Calcium	65		0.25	0.13	mg/L		12/12/18 17:32	12/13/18 18:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:55	5
Lead	0.00060	J	0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:55	5
Lithium	0.011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:55	5
Molybdenum	0.10		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:55	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:55	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.25	0.11	mg/L		12/12/18 17:32	12/17/18 19:21	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2600		25	17	mg/L			12/11/18 16:12	1
Chloride	1300		200	140	mg/L			12/21/18 17:07	100
Fluoride	0.75		0.10	0.032	mg/L			12/20/18 16:08	1
Sulfate	290		50	14	mg/L			12/21/18 07:52	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.89				SU			12/06/18 10:05	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 12/06/18 10:01
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 18:59	5
Arsenic	0.0016		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 18:59	5
Barium	0.45		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 18:59	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 18:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 18:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 18:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 18:59	5
Lithium	<0.0011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 18:59	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 18:59	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 18:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 18:59	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.5		0.50	0.21	mg/L		12/12/18 17:32	12/17/18 19:24	50
Calcium	310		2.5	1.3	mg/L		12/12/18 17:32	12/17/18 19:24	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.032		0.091	0.032	mg/L		12/10/18 12:48	12/12/18 14:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6300		50	34	mg/L			12/11/18 16:12	1
Chloride	3300		200	140	mg/L			12/21/18 17:07	100
Fluoride	0.050	J	0.10	0.032	mg/L			12/20/18 16:23	1
Sulfate	330		50	14	mg/L			12/21/18 07:58	10

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: DUP-02
Date Collected: 12/07/18 06:34
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 19:03	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 19:03	5
Barium	3.3		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 19:03	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 19:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 19:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 19:03	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 19:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 19:03	5
Lithium	0.020		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 19:03	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 19:03	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 19:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 19:03	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.9		0.25	0.11	mg/L		12/12/18 17:32	12/17/18 19:28	25
Calcium	340		1.3	0.63	mg/L		12/12/18 17:32	12/17/18 19:28	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5700		50	34	mg/L			12/11/18 16:12	1
Chloride	2900		180	130	mg/L			12/21/18 18:14	90
Fluoride	0.040	J	0.10	0.032	mg/L			12/20/18 16:26	1
Sulfate	<1.4		5.0	1.4	mg/L			12/21/18 08:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 12/07/18 08:45
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-13
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 15:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 15:59	5
Barium	<0.00049		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 15:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 15:59	5
Boron	<0.021		0.050	0.021	mg/L		12/12/18 17:32	12/13/18 15:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 15:59	5
Calcium	<0.13		0.25	0.13	mg/L		12/12/18 17:32	12/13/18 15:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 15:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 15:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 15:59	5
Lithium	<0.0011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 15:59	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 15:59	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 15:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 15:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 14:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22		5.0	3.4	mg/L			12/11/18 16:12	1
Chloride	<1.4		2.0	1.4	mg/L			12/21/18 17:44	1
Fluoride	0.080	J	0.10	0.032	mg/L			12/20/18 16:30	1
Sulfate	<1.4		5.0	1.4	mg/L			12/21/18 08:03	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 12/07/18 08:23

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:04	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	423631	12/17/18 18:34	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 13:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	424317	12/21/18 18:10	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:22	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	424165	12/21/18 08:41	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/07/18 08:23	CDH	TAL PEN

Client Sample ID: APMW-2

Date Collected: 12/07/18 07:34

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	423631	12/17/18 18:37	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 13:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	424317	12/21/18 18:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	424245	12/21/18 11:49	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/07/18 07:34	CDH	TAL PEN

Client Sample ID: APMW-3

Date Collected: 12/07/18 06:49

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:30	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	423631	12/17/18 18:41	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 13:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		300	424317	12/21/18 17:52	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-163233-3

Date Collected: 12/07/18 06:49

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:57	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	424165	12/21/18 08:30	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/07/18 06:49	CDH	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-163233-4

Date Collected: 12/06/18 16:24

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	423631	12/17/18 18:45	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 13:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		100	424299	12/21/18 17:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424165	12/21/18 08:22	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 16:24	CDH	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-163233-5

Date Collected: 12/06/18 15:06

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:37	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	423631	12/17/18 18:48	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		300	424299	12/21/18 17:19	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:53	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		50	424165	12/21/18 08:26	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 15:06	CDH	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-163233-6

Date Collected: 12/06/18 14:16

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:41	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	423631	12/17/18 19:10	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 14:59	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424165	12/21/18 08:26	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 14:16	CDH	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-163233-7

Date Collected: 12/06/18 13:19

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:44	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 15:03	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	424165	12/21/18 08:22	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 13:19	CDH	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-163233-8

Date Collected: 12/06/18 12:10

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:48	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	423631	12/17/18 19:13	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424101	12/20/18 15:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424165	12/21/18 08:26	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: APMW-8

Date Collected: 12/06/18 12:10

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 12:10	CDH	TAL PEN

Client Sample ID: APMW-9

Date Collected: 12/06/18 11:01

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:52	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	423631	12/17/18 19:17	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:00	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424125	12/20/18 16:21	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	424165	12/21/18 07:52	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 11:01	CDH	TAL PEN

Client Sample ID: APMW-10

Date Collected: 12/06/18 10:05

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:55	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	423631	12/17/18 19:21	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424125	12/20/18 16:08	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	424165	12/21/18 07:52	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	425192	12/06/18 10:05	CDH	TAL PEN

Client Sample ID: DUP-01

Date Collected: 12/06/18 10:01

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Client Sample ID: DUP-01

Lab Sample ID: 400-163233-11

Date Collected: 12/06/18 10:01

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	423552	12/13/18 18:59	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	423631	12/17/18 19:24	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	424299	12/21/18 17:07	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424125	12/20/18 16:23	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	424165	12/21/18 07:58	RRC	TAL PEN

Client Sample ID: DUP-02

Lab Sample ID: 400-163233-12

Date Collected: 12/07/18 06:34

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 19:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	423631	12/17/18 19:28	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		90	424317	12/21/18 18:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424125	12/20/18 16:26	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	424165	12/21/18 08:41	RRC	TAL PEN

Client Sample ID: FB-01

Lab Sample ID: 400-163233-13

Date Collected: 12/07/18 08:45

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422975	12/12/18 17:32	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	423552	12/13/18 15:59	DRE	TAL PEN
Total/NA	Prep	7470A			422576	12/10/18 12:48	JAP	TAL PEN
Total/NA	Analysis	7470A		1	422912	12/12/18 14:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	422779	12/11/18 16:12	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	424317	12/21/18 17:44	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	424125	12/20/18 16:30	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	424165	12/21/18 08:03	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Metals

Prep Batch: 422576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	7470A	
400-163233-2	APMW-2	Total/NA	Water	7470A	
400-163233-3	APMW-3	Total/NA	Water	7470A	
400-163233-4	APMW-4	Total/NA	Water	7470A	
400-163233-5	APMW-5	Total/NA	Water	7470A	
400-163233-6	APMW-6	Total/NA	Water	7470A	
400-163233-7	APMW-7	Total/NA	Water	7470A	
400-163233-8	APMW-8	Total/NA	Water	7470A	
400-163233-9	APMW-9	Total/NA	Water	7470A	
400-163233-10	APMW-10	Total/NA	Water	7470A	
400-163233-11	DUP-01	Total/NA	Water	7470A	
400-163233-12	DUP-02	Total/NA	Water	7470A	
400-163233-13	FB-01	Total/NA	Water	7470A	
MB 400-422576/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-422576/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-163233-1 MS	APMW-1	Total/NA	Water	7470A	
400-163233-1 MSD	APMW-1	Total/NA	Water	7470A	

Analysis Batch: 422912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	7470A	422576
400-163233-2	APMW-2	Total/NA	Water	7470A	422576
400-163233-3	APMW-3	Total/NA	Water	7470A	422576
400-163233-4	APMW-4	Total/NA	Water	7470A	422576
400-163233-5	APMW-5	Total/NA	Water	7470A	422576
400-163233-6	APMW-6	Total/NA	Water	7470A	422576
400-163233-7	APMW-7	Total/NA	Water	7470A	422576
400-163233-8	APMW-8	Total/NA	Water	7470A	422576
400-163233-9	APMW-9	Total/NA	Water	7470A	422576
400-163233-10	APMW-10	Total/NA	Water	7470A	422576
400-163233-11	DUP-01	Total/NA	Water	7470A	422576
400-163233-12	DUP-02	Total/NA	Water	7470A	422576
400-163233-13	FB-01	Total/NA	Water	7470A	422576
MB 400-422576/14-A	Method Blank	Total/NA	Water	7470A	422576
LCS 400-422576/15-A	Lab Control Sample	Total/NA	Water	7470A	422576
400-163233-1 MS	APMW-1	Total/NA	Water	7470A	422576
400-163233-1 MSD	APMW-1	Total/NA	Water	7470A	422576

Prep Batch: 422975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-163233-1	APMW-1	Total Recoverable	Water	3005A	
400-163233-2	APMW-2	Total Recoverable	Water	3005A	
400-163233-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-163233-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-163233-3	APMW-3	Total Recoverable	Water	3005A	
400-163233-4	APMW-4	Total Recoverable	Water	3005A	
400-163233-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-163233-5	APMW-5	Total Recoverable	Water	3005A	
400-163233-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-163233-6	APMW-6	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Metals (Continued)

Prep Batch: 422975 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-163233-7	APMW-7	Total Recoverable	Water	3005A	
400-163233-8	APMW-8	Total Recoverable	Water	3005A	
400-163233-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-163233-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-163233-9	APMW-9	Total Recoverable	Water	3005A	
400-163233-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-163233-10	APMW-10	Total Recoverable	Water	3005A	
400-163233-11	DUP-01	Total Recoverable	Water	3005A	
400-163233-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-163233-12	DUP-02	Total Recoverable	Water	3005A	
400-163233-12 - DL	DUP-02	Total Recoverable	Water	3005A	
400-163233-13	FB-01	Total Recoverable	Water	3005A	
MB 400-422975/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-422975/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-163059-D-8-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-163059-D-8-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 423552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total Recoverable	Water	6020	422975
400-163233-2	APMW-2	Total Recoverable	Water	6020	422975
400-163233-3	APMW-3	Total Recoverable	Water	6020	422975
400-163233-4	APMW-4	Total Recoverable	Water	6020	422975
400-163233-5	APMW-5	Total Recoverable	Water	6020	422975
400-163233-6	APMW-6	Total Recoverable	Water	6020	422975
400-163233-7	APMW-7	Total Recoverable	Water	6020	422975
400-163233-8	APMW-8	Total Recoverable	Water	6020	422975
400-163233-9	APMW-9	Total Recoverable	Water	6020	422975
400-163233-10	APMW-10	Total Recoverable	Water	6020	422975
400-163233-11	DUP-01	Total Recoverable	Water	6020	422975
400-163233-12	DUP-02	Total Recoverable	Water	6020	422975
400-163233-13	FB-01	Total Recoverable	Water	6020	422975
MB 400-422975/1-A ^5	Method Blank	Total Recoverable	Water	6020	422975
LCS 400-422975/2-A	Lab Control Sample	Total Recoverable	Water	6020	422975
400-163059-D-8-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	422975
400-163059-D-8-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	422975

Analysis Batch: 423631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1 - DL	APMW-1	Total Recoverable	Water	6020	422975
400-163233-2 - DL	APMW-2	Total Recoverable	Water	6020	422975
400-163233-3 - DL	APMW-3	Total Recoverable	Water	6020	422975
400-163233-4 - DL	APMW-4	Total Recoverable	Water	6020	422975
400-163233-5 - DL	APMW-5	Total Recoverable	Water	6020	422975
400-163233-6 - DL	APMW-6	Total Recoverable	Water	6020	422975
400-163233-8 - DL	APMW-8	Total Recoverable	Water	6020	422975
400-163233-9 - DL	APMW-9	Total Recoverable	Water	6020	422975
400-163233-10 - DL	APMW-10	Total Recoverable	Water	6020	422975
400-163233-11 - DL	DUP-01	Total Recoverable	Water	6020	422975
400-163233-12 - DL	DUP-02	Total Recoverable	Water	6020	422975

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

General Chemistry

Analysis Batch: 422779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	SM 2540C	
400-163233-2	APMW-2	Total/NA	Water	SM 2540C	
400-163233-3	APMW-3	Total/NA	Water	SM 2540C	
400-163233-4	APMW-4	Total/NA	Water	SM 2540C	
400-163233-5	APMW-5	Total/NA	Water	SM 2540C	
400-163233-6	APMW-6	Total/NA	Water	SM 2540C	
400-163233-7	APMW-7	Total/NA	Water	SM 2540C	
400-163233-8	APMW-8	Total/NA	Water	SM 2540C	
400-163233-9	APMW-9	Total/NA	Water	SM 2540C	
400-163233-10	APMW-10	Total/NA	Water	SM 2540C	
400-163233-11	DUP-01	Total/NA	Water	SM 2540C	
400-163233-12	DUP-02	Total/NA	Water	SM 2540C	
400-163233-13	FB-01	Total/NA	Water	SM 2540C	
MB 400-422779/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-422779/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-163039-B-9 DU	Duplicate	Total/NA	Water	SM 2540C	
400-163193-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 424101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-163233-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-163233-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-163233-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-163233-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-163233-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-163233-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-163233-8	APMW-8	Total/NA	Water	SM 4500 F C	
MB 400-424101/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-424101/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-163059-B-4 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-163059-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-163233-4 DU	APMW-4	Total/NA	Water	SM 4500 F C	

Analysis Batch: 424125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-163233-10	APMW-10	Total/NA	Water	SM 4500 F C	
400-163233-11	DUP-01	Total/NA	Water	SM 4500 F C	
400-163233-12	DUP-02	Total/NA	Water	SM 4500 F C	
400-163233-13	FB-01	Total/NA	Water	SM 4500 F C	
MB 400-424125/15	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-424125/14	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-163233-10 MS	APMW-10	Total/NA	Water	SM 4500 F C	
400-163233-10 MSD	APMW-10	Total/NA	Water	SM 4500 F C	
400-163351-A-3 DU	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 424165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
400-163233-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 424165 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-163233-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-163233-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-163233-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-163233-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-163233-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-163233-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-163233-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-163233-12	DUP-02	Total/NA	Water	SM 4500 SO4 E	
400-163233-13	FB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-424165/30	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-424165/31	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-424165/27	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-163238-E-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-163238-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-163238-E-4 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-163238-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 424245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-424245/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-424245/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-424245/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-163146-G-10 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-163146-G-10 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-163299-J-8 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 424299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-163233-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
400-163233-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-163233-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-163233-8	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-163233-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	
400-163233-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-163233-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-424299/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424299/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424299/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163221-I-2 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163221-I-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 424317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-163233-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-163233-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-163233-12	DUP-02	Total/NA	Water	SM 4500 Cl- E	
400-163233-13	FB-01	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 424317 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-424317/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424317/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424317/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163506-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163506-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Field Service / Mobile Lab

Analysis Batch: 425192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	Field Sampling	
400-163233-2	APMW-2	Total/NA	Water	Field Sampling	
400-163233-3	APMW-3	Total/NA	Water	Field Sampling	
400-163233-4	APMW-4	Total/NA	Water	Field Sampling	
400-163233-5	APMW-5	Total/NA	Water	Field Sampling	
400-163233-6	APMW-6	Total/NA	Water	Field Sampling	
400-163233-7	APMW-7	Total/NA	Water	Field Sampling	
400-163233-8	APMW-8	Total/NA	Water	Field Sampling	
400-163233-9	APMW-9	Total/NA	Water	Field Sampling	
400-163233-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-422975/1-A ^5
Matrix: Water
Analysis Batch: 423552

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		12/12/18 17:32	12/13/18 15:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		12/12/18 17:32	12/13/18 15:41	5
Barium	<0.00049		0.0025	0.00049	mg/L		12/12/18 17:32	12/13/18 15:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 15:41	5
Boron	<0.021		0.050	0.021	mg/L		12/12/18 17:32	12/13/18 15:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		12/12/18 17:32	12/13/18 15:41	5
Calcium	<0.13		0.25	0.13	mg/L		12/12/18 17:32	12/13/18 15:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		12/12/18 17:32	12/13/18 15:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		12/12/18 17:32	12/13/18 15:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		12/12/18 17:32	12/13/18 15:41	5
Lithium	<0.0011		0.0050	0.0011	mg/L		12/12/18 17:32	12/13/18 15:41	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		12/12/18 17:32	12/13/18 15:41	5
Selenium	<0.00071		0.0013	0.00071	mg/L		12/12/18 17:32	12/13/18 15:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		12/12/18 17:32	12/13/18 15:41	5

Lab Sample ID: LCS 400-422975/2-A
Matrix: Water
Analysis Batch: 423552

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0538		mg/L		108	80 - 120
Arsenic	0.0500	0.0502		mg/L		100	80 - 120
Barium	0.0500	0.0523		mg/L		105	80 - 120
Beryllium	0.0500	0.0525		mg/L		105	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Cadmium	0.0500	0.0525		mg/L		105	80 - 120
Calcium	5.00	5.02		mg/L		100	80 - 120
Chromium	0.0500	0.0506		mg/L		101	80 - 120
Cobalt	0.0500	0.0546		mg/L		109	80 - 120
Lead	0.0500	0.0487		mg/L		97	80 - 120
Lithium	0.0500	0.0527		mg/L		105	80 - 120
Molybdenum	0.0500	0.0482		mg/L		96	80 - 120
Selenium	0.0500	0.0472		mg/L		94	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-163059-D-8-C MS ^5
Matrix: Water
Analysis Batch: 423552

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 422975

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0010	J	0.0500	0.0584		mg/L		115	75 - 125
Arsenic	0.0030		0.0500	0.0564		mg/L		107	75 - 125
Barium	0.27		0.0500	0.321	4	mg/L		110	75 - 125
Beryllium	<0.00034	^	0.0500	0.0601	^	mg/L		120	75 - 125
Boron	0.85		0.100	0.957	4	mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0550		mg/L		110	75 - 125
Calcium	53		5.00	58.0	4	mg/L		98	75 - 125
Chromium	0.0020	J	0.0500	0.0533		mg/L		103	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-163059-D-8-C MS ^5
Matrix: Water
Analysis Batch: 423552

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 422975

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cobalt	0.00045	J	0.0500	0.0530		mg/L		105	75 - 125
Lead	0.0010	J	0.0500	0.0521		mg/L		102	75 - 125
Lithium	0.0089		0.0500	0.0655		mg/L		113	75 - 125
Molybdenum	0.025		0.0500	0.0787		mg/L		107	75 - 125
Selenium	0.0046		0.0500	0.0603		mg/L		111	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125

Lab Sample ID: 400-163059-D-8-D MSD ^5
Matrix: Water
Analysis Batch: 423552

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 422975

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0010	J	0.0500	0.0562		mg/L		110	75 - 125	4	20
Arsenic	0.0030		0.0500	0.0554		mg/L		105	75 - 125	2	20
Barium	0.27		0.0500	0.313	4	mg/L		96	75 - 125	2	20
Beryllium	<0.00034	^	0.0500	0.0598	^	mg/L		120	75 - 125	0	20
Boron	0.85		0.100	0.939	4	mg/L		93	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0550		mg/L		110	75 - 125	0	20
Calcium	53		5.00	57.2	4	mg/L		82	75 - 125	1	20
Chromium	0.0020	J	0.0500	0.0528		mg/L		101	75 - 125	1	20
Cobalt	0.00045	J	0.0500	0.0533		mg/L		106	75 - 125	1	20
Lead	0.0010	J	0.0500	0.0507		mg/L		99	75 - 125	3	20
Lithium	0.0089		0.0500	0.0641		mg/L		111	75 - 125	2	20
Molybdenum	0.025		0.0500	0.0760		mg/L		102	75 - 125	3	20
Selenium	0.0046		0.0500	0.0547		mg/L		100	75 - 125	10	20
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-422576/14-A
Matrix: Water
Analysis Batch: 422912

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422576

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		12/10/18 12:48	12/12/18 13:42	1

Lab Sample ID: LCS 400-422576/15-A
Matrix: Water
Analysis Batch: 422912

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422576

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000926		mg/L		92	80 - 120

Lab Sample ID: 400-163233-1 MS
Matrix: Water
Analysis Batch: 422912

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 422576

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00119	F1	mg/L		59	80 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Lab Sample ID: 400-163233-1 MSD
Matrix: Water
Analysis Batch: 422912

Client Sample ID: APMW-1
Prep Type: Total/NA
Prep Batch: 422576

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070	F1	0.00201	0.00110	F1	mg/L		55	80 - 120	8	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-422779/1
Matrix: Water
Analysis Batch: 422779

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			12/11/18 16:12	1

Lab Sample ID: LCS 400-422779/2
Matrix: Water
Analysis Batch: 422779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	252		mg/L		86	78 - 122

Lab Sample ID: 400-163039-B-9 DU
Matrix: Water
Analysis Batch: 422779

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	28		28.0		mg/L		0	5

Lab Sample ID: 400-163193-A-2 DU
Matrix: Water
Analysis Batch: 422779

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	44		44.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-424299/6
Matrix: Water
Analysis Batch: 424299

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/21/18 16:36	1

Lab Sample ID: LCS 400-424299/7
Matrix: Water
Analysis Batch: 424299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.5		mg/L		105	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MRL 400-424299/3
Matrix: Water
Analysis Batch: 424299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.01	J	mg/L		51	50 - 150

Lab Sample ID: 400-163221-I-2 MS
Matrix: Water
Analysis Batch: 424299

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	260		10.0	259	4	mg/L		0.4	73 - 120

Lab Sample ID: 400-163221-I-2 MSD
Matrix: Water
Analysis Batch: 424299

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	260		10.0	261	4	mg/L		23	73 - 120	1	8

Lab Sample ID: MB 400-424317/6
Matrix: Water
Analysis Batch: 424317

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			12/21/18 17:41	1

Lab Sample ID: LCS 400-424317/7
Matrix: Water
Analysis Batch: 424317

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.0		mg/L		107	90 - 110

Lab Sample ID: MRL 400-424317/3
Matrix: Water
Analysis Batch: 424317

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.81	J	mg/L		91	50 - 150

Lab Sample ID: 400-163506-A-1 MS
Matrix: Water
Analysis Batch: 424317

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.4		10.0	16.1		mg/L		117	73 - 120

Lab Sample ID: 400-163506-A-1 MSD
Matrix: Water
Analysis Batch: 424317

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.4		10.0	16.1		mg/L		118	73 - 120	0	8

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
 SDG: Ash Pond

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-424101/3
Matrix: Water
Analysis Batch: 424101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			12/20/18 13:45	1

Lab Sample ID: LCS 400-424101/4
Matrix: Water
Analysis Batch: 424101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.84		mg/L		96	90 - 110

Lab Sample ID: 400-163059-B-4 MS
Matrix: Water
Analysis Batch: 424101

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.19		1.00	1.21		mg/L		102	75 - 125

Lab Sample ID: 400-163059-B-4 MSD
Matrix: Water
Analysis Batch: 424101

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.19		1.00	1.21		mg/L		102	75 - 125	0	4

Lab Sample ID: 400-163233-4 DU
Matrix: Water
Analysis Batch: 424101

Client Sample ID: APMW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.51		0.510		mg/L		0	4

Lab Sample ID: MB 400-424125/15
Matrix: Water
Analysis Batch: 424125

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			12/20/18 15:58	1

Lab Sample ID: LCS 400-424125/14
Matrix: Water
Analysis Batch: 424125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	4.00	3.76		mg/L		94	90 - 110

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-163233-10 MS
Matrix: Water
Analysis Batch: 424125

Client Sample ID: APMW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.75		1.00	1.75		mg/L		100	75 - 125

Lab Sample ID: 400-163233-10 MSD
Matrix: Water
Analysis Batch: 424125

Client Sample ID: APMW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.75		1.00	1.75		mg/L		100	75 - 125	0	4

Lab Sample ID: 400-163351-A-3 DU
Matrix: Water
Analysis Batch: 424125

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	<0.032		<0.032		mg/L		NC	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-424165/30
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/21/18 08:03	1

Lab Sample ID: LCS 400-424165/31
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.3		mg/L		96	90 - 110

Lab Sample ID: MRL 400-424165/27
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.27	J	mg/L		85	50 - 150

Lab Sample ID: 400-163238-E-1 MS
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4		10.0	10.2		mg/L		102	77 - 128

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-163238-E-1 MSD
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.5		mg/L		105	77 - 128	3	5

Lab Sample ID: 400-163238-E-4 MS
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	24		10.0	33.2		mg/L		92	77 - 128		

Lab Sample ID: 400-163238-E-4 MSD
Matrix: Water
Analysis Batch: 424165

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	24		10.0	32.6		mg/L		86	77 - 128	2	5

Lab Sample ID: MB 400-424245/6
Matrix: Water
Analysis Batch: 424245

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			12/21/18 11:49	1

Lab Sample ID: LCS 400-424245/7
Matrix: Water
Analysis Batch: 424245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	15.0	14.9		mg/L		99	90 - 110		

Lab Sample ID: MRL 400-424245/3
Matrix: Water
Analysis Batch: 424245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	5.00	4.63	J	mg/L		93	50 - 150		

Lab Sample ID: 400-163146-G-10 MS
Matrix: Water
Analysis Batch: 424245

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.7		mg/L		107	77 - 128		

Lab Sample ID: 400-163146-G-10 MSD
Matrix: Water
Analysis Batch: 424245

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4		10.0	10.7		mg/L		107	77 - 128	1	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
 SDG: Ash Pond


Lab Sample ID: 400-163299-J-8 MSD
 Matrix: Water
 Analysis Batch: 424245

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	4200		100	4310	4	mg/L		114	77 - 128	1	5

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Chain of Custody Record

Client Information Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking Net(s): COC No: 400-73764-29084.1 Page: Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 400-1632333 COC 	
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (Water, Solid, On-wastewater, Tissue, A&M)		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc SM4500 Cl - Chloride, SM4500 SO4 - Sulfate, 4500 F - Fluoride, 2540C - TDS, 6020 - Sb, As, Ba, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, 7470A - Hg	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Special Instructions/Note: Total Number of containers		Special Instructions/Note: Total Number of containers	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Method of Shipment:	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:	
Relinquished by: <i>[Signature]</i> Date/Time: 12/7/18 1130 Company: VSAH		Relinquished by: <i>[Signature]</i> Date/Time: 12-7-18 1130 Company: TIA	
Relinquished by: <i>[Signature]</i> Date/Time:		Relinquished by: <i>[Signature]</i> Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: IR7 5.0°C, 3.0°C, 5.1°C	



Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-73764-29084.2 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOV#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A -Hg 4500 F, C - Fluoride, 2540C - TDS SM4500 Cl - Chloride, SM4500 SO4 - Sulfate 9315 Ra226, 9320 Ra228, Ra226Ra228, GFPC Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)	
Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - other (Specify) Other:		Special Instructions/Note: Total Number of containers	
Sample Identification Dup-02 FB-01		Matrix (W=water, S=solid, O=wastoli) (BT=Tissue, A=Air) Preservation Code: G Water G Water G Water	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 12/7/18 1130 Company: RWT Relinquished by: [Signature] Date/Time: 12/7/18 1130 Company: RWT Relinquished by: [Signature] Date/Time: 12/7/18 1130 Company: RWT		Received by: [Signature] Date/Time: 12-7-18 1130 Company: Coppery Received by: [Signature] Date/Time: 12-7-18 1130 Company: Coppery Received by: [Signature] Date/Time: 12-7-18 1130 Company: Coppery	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 5.0°C, 30°C, 5.1°C IR7	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-163233-1

SDG Number: Ash Pond

Login Number: 163233

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0°C, 3.0°C, 5.1°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18 *
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18 *
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-163233-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Mr. Cale B. Sellers



Authorized for release by:

1/10/2019 4:57:32 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163233-1	APMW-1	Water	12/07/18 08:23	12/07/18 11:30
400-163233-2	APMW-2	Water	12/07/18 07:34	12/07/18 11:30
400-163233-3	APMW-3	Water	12/07/18 06:49	12/07/18 11:30
400-163233-4	APMW-4	Water	12/06/18 16:24	12/07/18 11:30
400-163233-5	APMW-5	Water	12/06/18 15:06	12/07/18 11:30
400-163233-6	APMW-6	Water	12/06/18 14:16	12/07/18 11:30
400-163233-7	APMW-7	Water	12/06/18 13:19	12/07/18 11:30
400-163233-8	APMW-8	Water	12/06/18 12:10	12/07/18 11:30
400-163233-9	APMW-9	Water	12/06/18 11:01	12/07/18 11:30
400-163233-10	APMW-10	Water	12/06/18 10:05	12/07/18 11:30
400-163233-11	DUP-01	Water	12/06/18 10:01	12/07/18 11:30
400-163233-12	DUP-02	Water	12/07/18 06:34	12/07/18 11:30
400-163233-13	FB-01	Water	12/07/18 08:45	12/07/18 11:30

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-163233-1

Date Collected: 12/07/18 08:23

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.10		0.295	0.405	1.00	0.0880	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.16		0.399	0.494	1.00	0.318	pCi/L	12/12/18 11:10	12/26/18 12:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					12/12/18 11:10	12/26/18 12:43	1
Y Carrier	83.4		40 - 110					12/12/18 11:10	12/26/18 12:43	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.26		0.496	0.639	5.00	0.318	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
 SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-163233-2

Date Collected: 12/07/18 07:34

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	12.3		0.565	1.24	1.00	0.0751	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.21		0.516	0.770	1.00	0.317	pCi/L	12/12/18 11:10	12/26/18 12:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					12/12/18 11:10	12/26/18 12:43	1
Y Carrier	84.1		40 - 110					12/12/18 11:10	12/26/18 12:43	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	18.5		0.765	1.46	5.00	0.317	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-163233-3

Date Collected: 12/07/18 06:49

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.516		0.128	0.137	1.00	0.0969	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.74		0.525	0.745	1.00	0.347	pCi/L	12/12/18 11:10	12/26/18 12:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 11:10	12/26/18 12:43	1
Y Carrier	82.6		40 - 110					12/12/18 11:10	12/26/18 12:43	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.26		0.540	0.757	5.00	0.347	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-163233-4

Date Collected: 12/06/18 16:24

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.869		0.158	0.176	1.00	0.0808	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.81		0.343	0.381	1.00	0.365	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	80.4		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.68		0.378	0.420	5.00	0.365	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-163233-5

Date Collected: 12/06/18 15:06

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.617		0.140	0.151	1.00	0.0885	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.39		0.489	0.635	1.00	0.355	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	80.4		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.01		0.509	0.653	5.00	0.355	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-163233-6

Date Collected: 12/06/18 14:16

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.822		0.155	0.171	1.00	0.0806	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.22		0.365	0.418	1.00	0.366	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	83.0		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.04		0.397	0.452	5.00	0.366	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-7
Date Collected: 12/06/18 13:19
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-7
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.50		0.264	0.346	1.00	0.0835	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.15		0.460	0.597	1.00	0.351	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	81.5		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.64		0.530	0.690	5.00	0.351	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-163233-8

Date Collected: 12/06/18 12:10

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.04		0.171	0.195	1.00	0.0748	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.88		0.395	0.476	1.00	0.354	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	82.6		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.92		0.430	0.514	5.00	0.354	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-163233-9

Date Collected: 12/06/18 11:01

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.28		0.259	0.330	1.00	0.0792	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.64		0.494	0.653	1.00	0.383	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	80.4		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.92		0.558	0.732	5.00	0.383	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-163233-10

Date Collected: 12/06/18 10:05

Matrix: Water

Date Received: 12/07/18 11:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.24		0.192	0.222	1.00	0.0821	pCi/L	12/12/18 10:33	01/03/19 08:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					12/12/18 10:33	01/03/19 08:28	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.45		0.350	0.374	1.00	0.438	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	81.5		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.69		0.399	0.435	5.00	0.438	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 12/06/18 10:01
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.16		0.248	0.315	1.00	0.0868	pCi/L	12/12/18 10:33	01/03/19 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					12/12/18 10:33	01/03/19 08:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.99		0.505	0.682	1.00	0.378	pCi/L	12/12/18 11:10	12/26/18 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					12/12/18 11:10	12/26/18 12:44	1
Y Carrier	82.6		40 - 110					12/12/18 11:10	12/26/18 12:44	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.15		0.563	0.751	5.00	0.378	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: DUP-02

Date Collected: 12/07/18 06:34

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-12

Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	13.9		0.608	1.39	1.00	0.0671	pCi/L	12/12/18 10:33	01/03/19 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					12/12/18 10:33	01/03/19 08:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	7.25		0.569	0.876	1.00	0.385	pCi/L	12/12/18 11:10	12/26/18 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					12/12/18 11:10	12/26/18 12:45	1
Y Carrier	84.1		40 - 110					12/12/18 11:10	12/26/18 12:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	21.1		0.833	1.64	5.00	0.385	pCi/L		01/07/19 17:09	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 12/07/18 08:45
Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-13
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0155	U	0.0464	0.0465	1.00	0.0888	pCi/L	12/12/18 10:33	01/03/19 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					12/12/18 10:33	01/03/19 08:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0283	U	0.205	0.205	1.00	0.372	pCi/L	12/12/18 11:10	12/26/18 12:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					12/12/18 11:10	12/26/18 12:45	1
Y Carrier	83.0		40 - 110					12/12/18 11:10	12/26/18 12:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0128	U	0.210	0.210	5.00	0.372	pCi/L		01/07/19 17:09	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 12/07/18 08:23

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:43	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-2

Date Collected: 12/07/18 07:34

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:43	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-3

Date Collected: 12/07/18 06:49

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:43	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-4

Date Collected: 12/06/18 16:24

Date Received: 12/07/18 11:30

Lab Sample ID: 400-163233-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-163233-5

Date Collected: 12/06/18 15:06

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-6

Lab Sample ID: 400-163233-6

Date Collected: 12/06/18 14:16

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-7

Lab Sample ID: 400-163233-7

Date Collected: 12/06/18 13:19

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-8

Lab Sample ID: 400-163233-8

Date Collected: 12/06/18 12:10

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-163233-9

Date Collected: 12/06/18 11:01

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-163233-10

Date Collected: 12/06/18 10:05

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408718	01/03/19 08:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-163233-11

Date Collected: 12/06/18 10:01

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408717	01/03/19 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:44	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 400-163233-12

Date Collected: 12/07/18 06:34

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408717	01/03/19 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Client Sample ID: FB-01

Lab Sample ID: 400-163233-13

Date Collected: 12/07/18 08:45

Matrix: Water

Date Received: 12/07/18 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			405246	12/12/18 10:33	JLC	TAL SL
Total/NA	Analysis	9315		1	408717	01/03/19 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			405256	12/12/18 11:10	JLC	TAL SL
Total/NA	Analysis	9320		1	407545	12/26/18 12:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	409294	01/07/19 17:09	ALS	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
 SDG: Ash Pond

Rad

Prep Batch: 405246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	PrecSep-21	
400-163233-2	APMW-2	Total/NA	Water	PrecSep-21	
400-163233-3	APMW-3	Total/NA	Water	PrecSep-21	
400-163233-4	APMW-4	Total/NA	Water	PrecSep-21	
400-163233-5	APMW-5	Total/NA	Water	PrecSep-21	
400-163233-6	APMW-6	Total/NA	Water	PrecSep-21	
400-163233-7	APMW-7	Total/NA	Water	PrecSep-21	
400-163233-8	APMW-8	Total/NA	Water	PrecSep-21	
400-163233-9	APMW-9	Total/NA	Water	PrecSep-21	
400-163233-10	APMW-10	Total/NA	Water	PrecSep-21	
400-163233-11	DUP-01	Total/NA	Water	PrecSep-21	
400-163233-12	DUP-02	Total/NA	Water	PrecSep-21	
400-163233-13	FB-01	Total/NA	Water	PrecSep-21	
MB 160-405246/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-405246/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-155886-D-3-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 405256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163233-1	APMW-1	Total/NA	Water	PrecSep_0	
400-163233-2	APMW-2	Total/NA	Water	PrecSep_0	
400-163233-3	APMW-3	Total/NA	Water	PrecSep_0	
400-163233-4	APMW-4	Total/NA	Water	PrecSep_0	
400-163233-5	APMW-5	Total/NA	Water	PrecSep_0	
400-163233-6	APMW-6	Total/NA	Water	PrecSep_0	
400-163233-7	APMW-7	Total/NA	Water	PrecSep_0	
400-163233-8	APMW-8	Total/NA	Water	PrecSep_0	
400-163233-9	APMW-9	Total/NA	Water	PrecSep_0	
400-163233-10	APMW-10	Total/NA	Water	PrecSep_0	
400-163233-11	DUP-01	Total/NA	Water	PrecSep_0	
400-163233-12	DUP-02	Total/NA	Water	PrecSep_0	
400-163233-13	FB-01	Total/NA	Water	PrecSep_0	
MB 160-405256/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-405256/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-155886-D-3-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-405246/19-A
Matrix: Water
Analysis Batch: 408717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405246

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01213	U	0.0420	0.0420	1.00	0.0818	pCi/L	12/12/18 10:33	01/03/19 08:30	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					12/12/18 10:33	01/03/19 08:30	1

Lab Sample ID: LCS 160-405246/1-A
Matrix: Water
Analysis Batch: 408718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405246

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.27		1.06	1.00	0.0811	pCi/L	90	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	109		40 - 110						

Lab Sample ID: 500-155886-D-3-A DU
Matrix: Water
Analysis Batch: 408717

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 405246

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	2.18		2.074		0.305	1.00	0.0948	pCi/L	0.17	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	100		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-405256/19-A
Matrix: Water
Analysis Batch: 407545

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405256

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08403	U	0.182	0.182	1.00	0.313	pCi/L	12/12/18 11:10	12/26/18 12:45	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110					12/12/18 11:10	12/26/18 12:45	1
Y Carrier	83.4		40 - 110					12/12/18 11:10	12/26/18 12:45	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
 SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-405256/1-A
Matrix: Water
Analysis Batch: 407545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405256

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.09	7.945		0.933	1.00	0.330	pCi/L	87	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	109		40 - 110
Y Carrier	83.0		40 - 110


Lab Sample ID: 500-155886-D-3-B DU
Matrix: Water
Analysis Batch: 407545

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 405256

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.34		0.9624		0.295	1.00	0.355	pCi/L	0.60	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	84.1		40 - 110

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking Net(s): COC No: 400-73764-29084.1 Page: Page 1 of 2 Job #:					
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested  400-1632333 COC					
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP SM4500 Cl - Chloride, SM4500 SO4 - Sulfate, 4500 F - Fluoride, 2540C - TDS 6020 - Sb, As, Ba, Be, Ca, Cd, Cr, Co, Pb, Li, Mo, Se, Ti, Zn, Hg		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA W - pH 4-5 Z - other (specify) Other:					
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=soil, BT=Tissue, A=All)		Special Instructions/Note: Total Number of containers					
APMW-1	12/7/18	0823	G	Water	X	N	D
APMW-2	12/7/18	0734	G	Water	X	N	D
APMW-3	12/7/18	0640	G	Water	X	N	D
APMW-4	12/6/18	1624	G	Water	X	N	D
APMW-5	12/6/18	1506	G	Water	X	N	D
APMW-6	12/6/18	1416	G	Water	X	N	D
APMW-7	12/6/18	1359	G	Water	X	N	D
APMW-8	12/6/18	1210	G	Water	X	N	D
APMW-9	12/6/18	1101	G	Water	X	N	D
APMW-10	12/6/18	1005	G	Water	X	N	D
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Empty Kit Relinquished by: <i>[Signature]</i> Date: 12/7/18 Time: 1130 Relinquished by: <i>[Signature]</i> Date: 12/7/18 Time: 1130 Relinquished by: <i>[Signature]</i> Date: 12/7/18 Time: 1130		Method of Shipment: <i>Kathy Rawley</i> Date/Time: 12-7-18 1130 Company: TPA Date/Time: Company Date/Time: Company					
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: IR7 5.0°C, 3.0°C, 5.1°C					

Chain of Custody Record

Client Information Client Contact: Mr. Cale Sellers Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): COC No: 400-73764-29084.2 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: 40009375 Project #: 40009375 SOW#:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - other (specify) Other:	
Sample Identification Dup-02 FB-01		Total Number of containers:	
Sample Date: 12/7/18 Sample Time: 0634 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air): Water		Special Instructions/Note:	
Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 9315_Ra226, 9320_Ra228, Ra226Ra228_GFP SM4500 Cl-E-Chloride, SM4500_S04_F-Sulfate, 4500_F-C-Fluoride, 2540C-TDS 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Co,Pb,Li,Mo,Se,Tl, 7470A-Hg		Analysis Requested:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 12/7/18 1130 Company: [Signature]		Received by: [Signature] Date/Time: 12-7-18 1130 Company: Company	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 5.0°C, 30°C, 5.1°C IR7	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-163233-2

SDG Number: Ash Pond

Login Number: 163233

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.0°C, 3.0°C, 5.1°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-163233-2

SDG Number: Ash Pond

Login Number: 163233

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 12/11/18 04:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD ELAP		L2305	04-06-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-18 *
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	90125	12-31-18 *
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-163233-2
SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19 *
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-12	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-166095-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

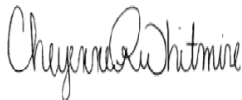
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:

2/28/2019 4:14:49 PM

Cheyenne Whitmire, Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Job ID: 400-166095-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-166095-1

Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-166095-1). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 430643 recovered above the upper control limit for Boron. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: FB-01 (400-166095-12).

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10) and DUP-01 (400-166095-11). Elevated reporting limits (RLs) are provided.

General Chemistry

Method(s) SM 4500 F C: The sample duplicate precision for the following sample associated with analytical batch 431013 was outside control limits: (400-166095-B-8 DU). The associated Laboratory Control Sample(LCS)met acceptance criteria.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), PMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10) and DUP-01 (400-166095-11). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 431371 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 431427 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to sulfate concentration in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-166269-I-1 MS) and (400-166269-I-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike (MS) recoveries for analytical batch 431427 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11), (400-166269-L-1), (400-166269-I-1 MS) and (400-166269-I-1 MSD). Elevated reporting limits (RLs) are provided.

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-166095-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00058	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.48		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.67		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium	0.0021	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Calcium - DL	290		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	3300		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1500		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.080	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	9.3		5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.01				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-2

Lab Sample ID: 400-166095-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	2.9		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.020		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	4.4		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	320		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	6200		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2800		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.050	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1.5	J	5.0	1.4	mg/L	1		SM 4500 SO4 E	Total/NA
Field pH	6.09				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-3

Lab Sample ID: 400-166095-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.065		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0028		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.071		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.061		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	6.0		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	300		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	16000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	9800		400	280	mg/L	200		SM 4500 Cl- E	Total/NA
Fluoride	0.35		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	1100		150	42	mg/L	30		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-3 (Continued)

Lab Sample ID: 400-166095-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.69				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-4

Lab Sample ID: 400-166095-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.45		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Chromium	0.0013	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0043		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.053		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0093	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Calcium - DL	180		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	7700		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3800		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.48		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	320		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.48				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-5

Lab Sample ID: 400-166095-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.23		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lead	0.00036	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.045		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.10		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	7.6		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	310		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	16000		1000	680	mg/L	1		SM 2540C	Total/NA
Chloride	8600		400	280	mg/L	200		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	930		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.42				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-6

Lab Sample ID: 400-166095-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-6 (Continued)

Lab Sample ID: 400-166095-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.46		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.24		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00075	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.026		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	19		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	180		5.0	2.5	mg/L	100		6020	Total Recoverable
Molybdenum - DL	1.3		0.30	0.040	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	4700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	2300		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	1.0		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	370		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	7.08				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-7

Lab Sample ID: 400-166095-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0012	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.59		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.95		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	95		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0018	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.0047	J	0.015	0.0020	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8200		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	4200		200	140	mg/L	100		SM 4500 Cl- E	Total/NA
Fluoride	0.10		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	74		25	7.0	mg/L	5		SM 4500 SO4 E	Total/NA
Field pH	6.37				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-8

Lab Sample ID: 400-166095-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.077		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.23		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.080		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.13		0.015	0.0020	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-8 (Continued)

Lab Sample ID: 400-166095-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	27		2.0	0.84	mg/L	200		6020	Total Recoverable
Calcium - DL	470		10	5.0	mg/L	200		6020	Total Recoverable
Total Dissolved Solids	8900		130	85	mg/L	1		SM 2540C	Total/NA
Chloride	3500		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.98		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	600		150	42	mg/L	30		SM 4500 SO4 E	Total/NA
Field pH	6.70				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-9

Lab Sample ID: 400-166095-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.44		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium	0.0026	J	0.0050	0.0011	mg/L	5		6020	Total Recoverable
Boron - DL	8.4		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	300		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	6700		50	34	mg/L	1		SM 2540C	Total/NA
Chloride	3000		160	110	mg/L	80		SM 4500 Cl- E	Total/NA
Fluoride	0.070	J	0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	280		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.24				SU	1		Field Sampling	Total/NA

Client Sample ID: APMW-10

Lab Sample ID: 400-166095-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.098		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.26		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	64		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.085		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	2.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	2800		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1200		60	42	mg/L	30		SM 4500 Cl- E	Total/NA
Fluoride	0.72		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	230		100	28	mg/L	20		SM 4500 SO4 E	Total/NA
Field pH	6.81				SU	1		Field Sampling	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 400-166095-11

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: DUP-01 (Continued)

Lab Sample ID: 400-166095-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.099		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.26		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	64		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0011	mg/L	5		6020	Total Recoverable
Molybdenum	0.085		0.015	0.0020	mg/L	5		6020	Total Recoverable
Boron - DL	2.3		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	2800		25	17	mg/L	1		SM 2540C	Total/NA
Chloride	1100		60	42	mg/L	30		SM 4500 Cl- E	Total/NA
Fluoride	0.71		0.10	0.032	mg/L	1		SM 4500 F C	Total/NA
Sulfate	210		100	28	mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: FB-01

Lab Sample ID: 400-166095-12

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 F C	Fluoride	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
Field Sampling	Field Sampling	EPA	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-166095-1	APMW-1	Water	02/13/19 14:13	02/14/19 17:43
400-166095-2	APMW-2	Water	02/13/19 13:55	02/14/19 17:43
400-166095-3	APMW-3	Water	02/13/19 12:40	02/14/19 17:43
400-166095-4	APMW-4	Water	02/13/19 11:10	02/14/19 17:43
400-166095-5	APMW-5	Water	02/13/19 08:25	02/14/19 17:43
400-166095-6	APMW-6	Water	02/13/19 11:45	02/14/19 17:43
400-166095-7	APMW-7	Water	02/13/19 10:46	02/14/19 17:43
400-166095-8	APMW-8	Water	02/13/19 09:38	02/14/19 17:43
400-166095-9	APMW-9	Water	02/13/19 08:45	02/14/19 17:43
400-166095-10	APMW-10	Water	02/13/19 07:45	02/14/19 17:43
400-166095-11	DUP-01	Water	02/13/19 06:45	02/14/19 17:43
400-166095-12	FB-01	Water	02/13/19 08:20	02/14/19 17:43

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-1
Date Collected: 02/13/19 14:13
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:42	02/18/19 16:56	5
Arsenic	0.00058	J	0.0013	0.00046	mg/L		02/18/19 11:42	02/18/19 16:56	5
Barium	0.48		0.0025	0.00049	mg/L		02/18/19 11:42	02/18/19 16:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:56	5
Boron	0.67		0.050	0.021	mg/L		02/18/19 11:42	02/18/19 16:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:42	02/18/19 16:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:42	02/18/19 16:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:42	02/18/19 16:56	5
Lithium	0.0021	J	0.0050	0.0011	mg/L		02/18/19 11:42	02/18/19 16:56	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:42	02/18/19 16:56	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:42	02/18/19 16:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:42	02/18/19 16:56	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	290		2.5	1.3	mg/L		02/18/19 11:42	02/19/19 12:29	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		25	17	mg/L			02/18/19 12:43	1
Chloride	1500		160	110	mg/L			02/25/19 12:34	80
Fluoride	0.080	J	0.10	0.032	mg/L			02/22/19 13:36	1
Sulfate	9.3		5.0	1.4	mg/L			02/26/19 13:44	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.01				SU			02/13/19 14:13	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-166095-2

Date Collected: 02/13/19 13:55

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:42	02/18/19 16:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/18/19 11:42	02/18/19 16:59	5
Barium	2.9		0.0025	0.00049	mg/L		02/18/19 11:42	02/18/19 16:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:42	02/18/19 16:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:42	02/18/19 16:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:42	02/18/19 16:59	5
Lithium	0.020		0.0050	0.0011	mg/L		02/18/19 11:42	02/18/19 16:59	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:42	02/18/19 16:59	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:42	02/18/19 16:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:42	02/18/19 16:59	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4		0.50	0.21	mg/L		02/18/19 11:42	02/20/19 11:17	50
Calcium	320		2.5	1.3	mg/L		02/18/19 11:42	02/20/19 11:17	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6200		50	34	mg/L			02/18/19 12:43	1
Chloride	2800		160	110	mg/L			02/25/19 12:34	80
Fluoride	0.050	J	0.10	0.032	mg/L			02/22/19 13:38	1
Sulfate	1.5	J	5.0	1.4	mg/L			02/26/19 17:32	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.09				SU			02/13/19 13:55	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-166095-3

Date Collected: 02/13/19 12:40

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:42	02/18/19 17:03	5
Arsenic	0.065		0.0013	0.00046	mg/L		02/18/19 11:42	02/18/19 17:03	5
Barium	0.10		0.0025	0.00049	mg/L		02/18/19 11:42	02/18/19 17:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 17:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 17:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:42	02/18/19 17:03	5
Cobalt	0.0028		0.0025	0.00040	mg/L		02/18/19 11:42	02/18/19 17:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:42	02/18/19 17:03	5
Lithium	0.071		0.0050	0.0011	mg/L		02/18/19 11:42	02/18/19 17:03	5
Molybdenum	0.061		0.015	0.0020	mg/L		02/18/19 11:42	02/18/19 17:03	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:42	02/18/19 17:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:42	02/18/19 17:03	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.0		0.50	0.21	mg/L		02/18/19 11:42	02/20/19 11:20	50
Calcium	300		2.5	1.3	mg/L		02/18/19 11:42	02/20/19 11:20	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16000		1000	680	mg/L			02/18/19 14:53	1
Chloride	9800		400	280	mg/L			02/25/19 13:09	200
Fluoride	0.35		0.10	0.032	mg/L			02/22/19 13:41	1
Sulfate	1100		150	42	mg/L			02/26/19 18:02	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.69				SU			02/13/19 12:40	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-166095-4

Date Collected: 02/13/19 11:10

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 20:41	5
Arsenic	0.019		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 20:41	5
Barium	0.45		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 20:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:41	5
Boron	1.7		0.050	0.021	mg/L		02/18/19 11:51	02/18/19 20:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:41	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 20:41	5
Cobalt	0.0043		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 20:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 20:41	5
Lithium	0.053		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 20:41	5
Molybdenum	0.0093	J	0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 20:41	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 20:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 20:41	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	180		2.5	1.3	mg/L		02/18/19 11:51	02/20/19 11:24	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7700		130	85	mg/L			02/18/19 14:53	1
Chloride	3800		160	110	mg/L			02/25/19 12:34	80
Fluoride	0.48		0.10	0.032	mg/L			02/22/19 13:43	1
Sulfate	320		100	28	mg/L			02/26/19 18:06	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.48				SU			02/13/19 11:10	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-166095-5

Date Collected: 02/13/19 08:25

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 20:44	5
Arsenic	0.23		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 20:44	5
Barium	0.10		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 20:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 20:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 20:44	5
Lead	0.00036	J	0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 20:44	5
Lithium	0.045		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 20:44	5
Molybdenum	0.10		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 20:44	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 20:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 20:44	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.6		0.50	0.21	mg/L		02/18/19 11:51	02/20/19 11:27	50
Calcium	310		2.5	1.3	mg/L		02/18/19 11:51	02/20/19 11:27	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16000		1000	680	mg/L			02/18/19 14:53	1
Chloride	8600		400	280	mg/L			02/25/19 13:09	200
Fluoride	0.070	J	0.10	0.032	mg/L			02/22/19 13:46	1
Sulfate	930		150	42	mg/L			02/26/19 18:06	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.42				SU			02/13/19 08:25	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-166095-6

Date Collected: 02/13/19 11:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 20:48	5
Arsenic	0.46		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 20:48	5
Barium	0.24		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 20:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:48	5
Cadmium	0.00075	J	0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 20:48	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 20:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 20:48	5
Lithium	0.026		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 20:48	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 20:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 20:48	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19		1.0	0.42	mg/L		02/18/19 11:51	02/20/19 11:31	100
Calcium	180		5.0	2.5	mg/L		02/18/19 11:51	02/20/19 11:31	100
Molybdenum	1.3		0.30	0.040	mg/L		02/18/19 11:51	02/20/19 11:31	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4700		50	34	mg/L			02/18/19 14:53	1
Chloride	2300		160	110	mg/L			02/27/19 16:42	80
Fluoride	1.0		0.10	0.032	mg/L			02/22/19 13:48	1
Sulfate	370		100	28	mg/L			02/26/19 18:07	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.08				SU			02/13/19 11:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-7

Lab Sample ID: 400-166095-7

Date Collected: 02/13/19 10:46

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 20:52	5
Arsenic	0.0012	J	0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 20:52	5
Barium	0.59		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 20:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:52	5
Boron	0.95		0.050	0.021	mg/L		02/18/19 11:51	02/18/19 20:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 20:52	5
Calcium	95		0.25	0.13	mg/L		02/18/19 11:51	02/18/19 20:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 20:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 20:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 20:52	5
Lithium	0.0018	J	0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 20:52	5
Molybdenum	0.0047	J	0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 20:52	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 20:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 20:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8200		130	85	mg/L			02/18/19 14:53	1
Chloride	4200		200	140	mg/L			02/27/19 17:24	100
Fluoride	0.10		0.10	0.032	mg/L			02/22/19 13:50	1
Sulfate	74		25	7.0	mg/L			02/26/19 18:07	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.37				SU			02/13/19 10:46	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-166095-8

Date Collected: 02/13/19 09:38

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 21:13	5
Arsenic	0.077		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 21:13	5
Barium	0.23		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 21:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 21:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 21:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 21:13	5
Lithium	0.080		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 21:13	5
Molybdenum	0.13		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 21:13	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 21:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 21:13	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	27		2.0	0.84	mg/L		02/18/19 11:51	02/20/19 11:35	200
Calcium	470		10	5.0	mg/L		02/18/19 11:51	02/20/19 11:35	200

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8900		130	85	mg/L			02/18/19 14:53	1
Chloride	3500		160	110	mg/L			02/27/19 16:42	80
Fluoride	0.98		0.10	0.032	mg/L			02/22/19 14:00	1
Sulfate	600		150	42	mg/L			02/26/19 18:11	30

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.70				SU			02/13/19 09:38	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-166095-9

Date Collected: 02/13/19 08:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 21:17	5
Arsenic	0.0013		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 21:17	5
Barium	0.44		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 21:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 21:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 21:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 21:17	5
Lithium	0.0026	J	0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 21:17	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 21:17	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 21:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 21:17	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.4		1.0	0.42	mg/L		02/18/19 11:51	02/20/19 11:38	100
Calcium	300		5.0	2.5	mg/L		02/18/19 11:51	02/20/19 11:38	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6700		50	34	mg/L			02/18/19 14:53	1
Chloride	3000		160	110	mg/L			02/27/19 16:45	80
Fluoride	0.070	J	0.10	0.032	mg/L			02/22/19 14:07	1
Sulfate	280		100	28	mg/L			02/26/19 18:11	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.24				SU			02/13/19 08:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-166095-10

Date Collected: 02/13/19 07:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 21:21	5
Arsenic	0.098		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 21:21	5
Barium	0.26		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 21:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:21	5
Calcium	64		0.25	0.13	mg/L		02/18/19 11:51	02/18/19 21:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 21:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 21:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 21:21	5
Lithium	0.012		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 21:21	5
Molybdenum	0.085		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 21:21	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 21:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 21:21	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.4		0.25	0.11	mg/L		02/18/19 11:51	02/20/19 11:42	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2800		25	17	mg/L			02/18/19 14:53	1
Chloride	1200		60	42	mg/L			02/27/19 16:42	30
Fluoride	0.72		0.10	0.032	mg/L			02/22/19 14:09	1
Sulfate	230		100	28	mg/L			02/26/19 18:11	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.81				SU			02/13/19 07:45	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 02/13/19 06:45
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-11
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 21:24	5
Arsenic	0.099		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 21:24	5
Barium	0.26		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 21:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:24	5
Calcium	64		0.25	0.13	mg/L		02/18/19 11:51	02/18/19 21:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 21:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 21:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 21:24	5
Lithium	0.012		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 21:24	5
Molybdenum	0.085		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 21:24	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 21:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 21:24	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.3		0.25	0.11	mg/L		02/18/19 11:51	02/20/19 11:45	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2800		25	17	mg/L			02/18/19 14:53	1
Chloride	1100		60	42	mg/L			02/27/19 16:45	30
Fluoride	0.71		0.10	0.032	mg/L			02/22/19 14:13	1
Sulfate	210		100	28	mg/L			02/26/19 18:11	20

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 02/13/19 08:20
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 21:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 21:28	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 21:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 21:28	5
Calcium	<0.13		0.25	0.13	mg/L		02/18/19 11:51	02/18/19 21:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 21:28	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 21:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 21:28	5
Lithium	<0.0011		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 21:28	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 21:28	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 21:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 21:28	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021	^	0.050	0.021	mg/L		02/18/19 11:51	02/19/19 13:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:33	02/21/19 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			02/18/19 14:53	1
Chloride	<1.4		2.0	1.4	mg/L			02/27/19 16:12	1
Fluoride	<0.032		0.10	0.032	mg/L			02/22/19 14:17	1
Sulfate	<1.4		5.0	1.4	mg/L			02/26/19 17:43	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F3	Duplicate RPD exceeds the control limit
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 02/13/19 14:13

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 16:56	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	430643	02/19/19 12:29	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430370	02/18/19 12:43	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	431213	02/25/19 12:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:36	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	431371	02/26/19 13:44	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 14:13	MCS	TAL PEN

Client Sample ID: APMW-2

Date Collected: 02/13/19 13:55

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 16:59	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	430835	02/20/19 11:17	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430370	02/18/19 12:43	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	431213	02/25/19 12:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:38	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	431427	02/26/19 17:32	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 13:55	MCS	TAL PEN

Client Sample ID: APMW-3

Date Collected: 02/13/19 12:40

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 17:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430364	02/18/19 11:42	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	430835	02/20/19 11:20	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		200	431213	02/25/19 13:09	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-166095-3

Date Collected: 02/13/19 12:40

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:41	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	431427	02/26/19 18:02	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 12:40	MCS	TAL PEN

Client Sample ID: APMW-4

Lab Sample ID: 400-166095-4

Date Collected: 02/13/19 11:10

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 20:41	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	430835	02/20/19 11:24	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		80	431213	02/25/19 12:34	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:43	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	431427	02/26/19 18:06	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 11:10	MCS	TAL PEN

Client Sample ID: APMW-5

Lab Sample ID: 400-166095-5

Date Collected: 02/13/19 08:25

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 20:44	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	430835	02/20/19 11:27	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		200	431213	02/25/19 13:09	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	431427	02/26/19 18:06	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 08:25	MCS	TAL PEN

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-166095-6

Date Collected: 02/13/19 11:45

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 20:48	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	430835	02/20/19 11:31	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	431575	02/27/19 16:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	431427	02/26/19 18:07	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 11:45	MCS	TAL PEN

Client Sample ID: APMW-7

Lab Sample ID: 400-166095-7

Date Collected: 02/13/19 10:46

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 20:52	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		100	431575	02/27/19 17:24	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 13:50	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	431427	02/26/19 18:07	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 10:46	MCS	TAL PEN

Client Sample ID: APMW-8

Lab Sample ID: 400-166095-8

Date Collected: 02/13/19 09:38

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 21:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200	430835	02/20/19 11:35	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	431575	02/27/19 16:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 14:00	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	431427	02/26/19 18:11	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: APMW-8

Date Collected: 02/13/19 09:38

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 09:38	MCS	TAL PEN

Client Sample ID: APMW-9

Date Collected: 02/13/19 08:45

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 21:17	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100	430835	02/20/19 11:38	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		80	431575	02/27/19 16:45	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 14:07	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	431427	02/26/19 18:11	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 08:45	MCS	TAL PEN

Client Sample ID: APMW-10

Date Collected: 02/13/19 07:45

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 21:21	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	430835	02/20/19 11:42	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		30	431575	02/27/19 16:42	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 14:09	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	431427	02/26/19 18:11	RRC	TAL PEN
Total/NA	Analysis	Field Sampling		1	431461	02/13/19 07:45	MCS	TAL PEN

Client Sample ID: DUP-01

Date Collected: 02/13/19 06:45

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Client Sample ID: DUP-01

Lab Sample ID: 400-166095-11

Date Collected: 02/13/19 06:45

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	430473	02/18/19 21:24	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	430835	02/20/19 11:45	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 13:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		30	431575	02/27/19 16:45	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 14:13	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	431427	02/26/19 18:11	RRC	TAL PEN

Client Sample ID: FB-01

Lab Sample ID: 400-166095-12

Date Collected: 02/13/19 08:20

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	430473	02/18/19 21:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		430366	02/18/19 11:51	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	430643	02/19/19 13:26	DRE	TAL PEN
Total/NA	Prep	7470A			430667	02/20/19 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	430872	02/21/19 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	430406	02/18/19 14:53	CLB	TAL PEN
Total/NA	Analysis	SM 4500 CI- E		1	431575	02/27/19 16:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 F C		1	431013	02/22/19 14:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	431427	02/26/19 17:43	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Metals

Prep Batch: 430364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total Recoverable	Water	3005A	
400-166095-1 - DL	APMW-1	Total Recoverable	Water	3005A	
400-166095-2	APMW-2	Total Recoverable	Water	3005A	
400-166095-2 - DL	APMW-2	Total Recoverable	Water	3005A	
400-166095-3 - DL	APMW-3	Total Recoverable	Water	3005A	
400-166095-3	APMW-3	Total Recoverable	Water	3005A	
MB 400-430364/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-430364/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-166110-H-3-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-166110-H-3-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 430366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-4	APMW-4	Total Recoverable	Water	3005A	
400-166095-4 - DL	APMW-4	Total Recoverable	Water	3005A	
400-166095-5 - DL	APMW-5	Total Recoverable	Water	3005A	
400-166095-5	APMW-5	Total Recoverable	Water	3005A	
400-166095-6 - DL	APMW-6	Total Recoverable	Water	3005A	
400-166095-6	APMW-6	Total Recoverable	Water	3005A	
400-166095-7	APMW-7	Total Recoverable	Water	3005A	
400-166095-8	APMW-8	Total Recoverable	Water	3005A	
400-166095-8 - DL	APMW-8	Total Recoverable	Water	3005A	
400-166095-9	APMW-9	Total Recoverable	Water	3005A	
400-166095-9 - DL	APMW-9	Total Recoverable	Water	3005A	
400-166095-10	APMW-10	Total Recoverable	Water	3005A	
400-166095-10 - DL	APMW-10	Total Recoverable	Water	3005A	
400-166095-11 - DL	DUP-01	Total Recoverable	Water	3005A	
400-166095-11	DUP-01	Total Recoverable	Water	3005A	
400-166095-12 - RA	FB-01	Total Recoverable	Water	3005A	
400-166095-12	FB-01	Total Recoverable	Water	3005A	
MB 400-430366/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-430366/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-166134-L-7-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-166134-L-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 430473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total Recoverable	Water	6020	430364
400-166095-2	APMW-2	Total Recoverable	Water	6020	430364
400-166095-3	APMW-3	Total Recoverable	Water	6020	430364
400-166095-4	APMW-4	Total Recoverable	Water	6020	430366
400-166095-5	APMW-5	Total Recoverable	Water	6020	430366
400-166095-6	APMW-6	Total Recoverable	Water	6020	430366
400-166095-7	APMW-7	Total Recoverable	Water	6020	430366
400-166095-8	APMW-8	Total Recoverable	Water	6020	430366
400-166095-9	APMW-9	Total Recoverable	Water	6020	430366
400-166095-10	APMW-10	Total Recoverable	Water	6020	430366
400-166095-11	DUP-01	Total Recoverable	Water	6020	430366
400-166095-12	FB-01	Total Recoverable	Water	6020	430366
MB 400-430364/1-A ^5	Method Blank	Total Recoverable	Water	6020	430364
MB 400-430366/1-A ^5	Method Blank	Total Recoverable	Water	6020	430366

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 430473 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-430364/2-A	Lab Control Sample	Total Recoverable	Water	6020	430364
LCS 400-430366/2-A	Lab Control Sample	Total Recoverable	Water	6020	430366
400-166110-H-3-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	430364
400-166110-H-3-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	430364
400-166134-L-7-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	430366
400-166134-L-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	430366

Analysis Batch: 430643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1 - DL	APMW-1	Total Recoverable	Water	6020	430364
400-166095-12 - RA	FB-01	Total Recoverable	Water	6020	430366

Prep Batch: 430667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	7470A	
400-166095-2	APMW-2	Total/NA	Water	7470A	
400-166095-3	APMW-3	Total/NA	Water	7470A	
400-166095-4	APMW-4	Total/NA	Water	7470A	
400-166095-5	APMW-5	Total/NA	Water	7470A	
400-166095-6	APMW-6	Total/NA	Water	7470A	
400-166095-7	APMW-7	Total/NA	Water	7470A	
400-166095-8	APMW-8	Total/NA	Water	7470A	
400-166095-9	APMW-9	Total/NA	Water	7470A	
400-166095-10	APMW-10	Total/NA	Water	7470A	
400-166095-11	DUP-01	Total/NA	Water	7470A	
400-166095-12	FB-01	Total/NA	Water	7470A	
MB 400-430667/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-430667/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-166198-J-2-C MS	Matrix Spike	Total/NA	Water	7470A	
400-166198-J-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 430835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-2 - DL	APMW-2	Total Recoverable	Water	6020	430364
400-166095-3 - DL	APMW-3	Total Recoverable	Water	6020	430364
400-166095-4 - DL	APMW-4	Total Recoverable	Water	6020	430366
400-166095-5 - DL	APMW-5	Total Recoverable	Water	6020	430366
400-166095-6 - DL	APMW-6	Total Recoverable	Water	6020	430366
400-166095-8 - DL	APMW-8	Total Recoverable	Water	6020	430366
400-166095-9 - DL	APMW-9	Total Recoverable	Water	6020	430366
400-166095-10 - DL	APMW-10	Total Recoverable	Water	6020	430366
400-166095-11 - DL	DUP-01	Total Recoverable	Water	6020	430366

Analysis Batch: 430872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	7470A	430667
400-166095-2	APMW-2	Total/NA	Water	7470A	430667
400-166095-3	APMW-3	Total/NA	Water	7470A	430667
400-166095-4	APMW-4	Total/NA	Water	7470A	430667
400-166095-5	APMW-5	Total/NA	Water	7470A	430667
400-166095-6	APMW-6	Total/NA	Water	7470A	430667

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 430872 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-7	APMW-7	Total/NA	Water	7470A	430667
400-166095-8	APMW-8	Total/NA	Water	7470A	430667
400-166095-9	APMW-9	Total/NA	Water	7470A	430667
400-166095-10	APMW-10	Total/NA	Water	7470A	430667
400-166095-11	DUP-01	Total/NA	Water	7470A	430667
400-166095-12	FB-01	Total/NA	Water	7470A	430667
MB 400-430667/14-A	Method Blank	Total/NA	Water	7470A	430667
LCS 400-430667/15-A	Lab Control Sample	Total/NA	Water	7470A	430667
400-166198-J-2-C MS	Matrix Spike	Total/NA	Water	7470A	430667
400-166198-J-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	430667

General Chemistry

Analysis Batch: 430370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	SM 2540C	
400-166095-2	APMW-2	Total/NA	Water	SM 2540C	
MB 400-430370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-430370/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-165983-J-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 430406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-3	APMW-3	Total/NA	Water	SM 2540C	
400-166095-4	APMW-4	Total/NA	Water	SM 2540C	
400-166095-5	APMW-5	Total/NA	Water	SM 2540C	
400-166095-6	APMW-6	Total/NA	Water	SM 2540C	
400-166095-7	APMW-7	Total/NA	Water	SM 2540C	
400-166095-8	APMW-8	Total/NA	Water	SM 2540C	
400-166095-9	APMW-9	Total/NA	Water	SM 2540C	
400-166095-10	APMW-10	Total/NA	Water	SM 2540C	
400-166095-11	DUP-01	Total/NA	Water	SM 2540C	
400-166095-12	FB-01	Total/NA	Water	SM 2540C	
MB 400-430406/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-430406/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-166039-T-2 DU	Duplicate	Total/NA	Water	SM 2540C	
400-166100-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 431013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	SM 4500 F C	
400-166095-2	APMW-2	Total/NA	Water	SM 4500 F C	
400-166095-3	APMW-3	Total/NA	Water	SM 4500 F C	
400-166095-4	APMW-4	Total/NA	Water	SM 4500 F C	
400-166095-5	APMW-5	Total/NA	Water	SM 4500 F C	
400-166095-6	APMW-6	Total/NA	Water	SM 4500 F C	
400-166095-7	APMW-7	Total/NA	Water	SM 4500 F C	
400-166095-8	APMW-8	Total/NA	Water	SM 4500 F C	
400-166095-9	APMW-9	Total/NA	Water	SM 4500 F C	
400-166095-10	APMW-10	Total/NA	Water	SM 4500 F C	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 431013 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-11	DUP-01	Total/NA	Water	SM 4500 F C	
400-166095-12	FB-01	Total/NA	Water	SM 4500 F C	
MB 400-431013/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-431013/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
400-165917-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
400-165917-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	
400-166095-8 DU	APMW-8	Total/NA	Water	SM 4500 F C	

Analysis Batch: 431213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	SM 4500 Cl- E	
400-166095-2	APMW-2	Total/NA	Water	SM 4500 Cl- E	
400-166095-3	APMW-3	Total/NA	Water	SM 4500 Cl- E	
400-166095-4	APMW-4	Total/NA	Water	SM 4500 Cl- E	
400-166095-5	APMW-5	Total/NA	Water	SM 4500 Cl- E	
MB 400-431213/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-431213/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-431213/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-166082-D-3 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-166082-D-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 431371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	SM 4500 SO4 E	
MB 400-431371/29	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-431371/30	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-431371/26	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-165970-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-165970-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 431427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-2	APMW-2	Total/NA	Water	SM 4500 SO4 E	
400-166095-3	APMW-3	Total/NA	Water	SM 4500 SO4 E	
400-166095-4	APMW-4	Total/NA	Water	SM 4500 SO4 E	
400-166095-5	APMW-5	Total/NA	Water	SM 4500 SO4 E	
400-166095-6	APMW-6	Total/NA	Water	SM 4500 SO4 E	
400-166095-7	APMW-7	Total/NA	Water	SM 4500 SO4 E	
400-166095-8	APMW-8	Total/NA	Water	SM 4500 SO4 E	
400-166095-9	APMW-9	Total/NA	Water	SM 4500 SO4 E	
400-166095-10	APMW-10	Total/NA	Water	SM 4500 SO4 E	
400-166095-11	DUP-01	Total/NA	Water	SM 4500 SO4 E	
400-166095-12	FB-01	Total/NA	Water	SM 4500 SO4 E	
MB 400-431427/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-431427/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-431427/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-166225-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-166225-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	
400-166269-I-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-166269-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Pensacola

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 431575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-6	APMW-6	Total/NA	Water	SM 4500 Cl- E	
400-166095-7	APMW-7	Total/NA	Water	SM 4500 Cl- E	
400-166095-8	APMW-8	Total/NA	Water	SM 4500 Cl- E	
400-166095-9	APMW-9	Total/NA	Water	SM 4500 Cl- E	
400-166095-10	APMW-10	Total/NA	Water	SM 4500 Cl- E	
400-166095-11	DUP-01	Total/NA	Water	SM 4500 Cl- E	
400-166095-12	FB-01	Total/NA	Water	SM 4500 Cl- E	
MB 400-431575/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-431575/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-431575/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-166225-F-4 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-166225-F-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	
400-166263-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-166263-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Field Service / Mobile Lab

Analysis Batch: 431461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	Field Sampling	
400-166095-2	APMW-2	Total/NA	Water	Field Sampling	
400-166095-3	APMW-3	Total/NA	Water	Field Sampling	
400-166095-4	APMW-4	Total/NA	Water	Field Sampling	
400-166095-5	APMW-5	Total/NA	Water	Field Sampling	
400-166095-6	APMW-6	Total/NA	Water	Field Sampling	
400-166095-7	APMW-7	Total/NA	Water	Field Sampling	
400-166095-8	APMW-8	Total/NA	Water	Field Sampling	
400-166095-9	APMW-9	Total/NA	Water	Field Sampling	
400-166095-10	APMW-10	Total/NA	Water	Field Sampling	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-430364/1-A ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 430364

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:42	02/18/19 16:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/18/19 11:42	02/18/19 16:38	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/18/19 11:42	02/18/19 16:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:38	5
Boron	<0.021		0.050	0.021	mg/L		02/18/19 11:42	02/18/19 16:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:42	02/18/19 16:38	5
Calcium	<0.13		0.25	0.13	mg/L		02/18/19 11:42	02/18/19 16:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:42	02/18/19 16:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:42	02/18/19 16:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:42	02/18/19 16:38	5
Lithium	<0.0011		0.0050	0.0011	mg/L		02/18/19 11:42	02/18/19 16:38	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:42	02/18/19 16:38	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:42	02/18/19 16:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:42	02/18/19 16:38	5

Lab Sample ID: LCS 400-430364/2-A
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 430364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0471		mg/L		94	80 - 120
Arsenic	0.0500	0.0496		mg/L		99	80 - 120
Barium	0.0500	0.0508		mg/L		102	80 - 120
Beryllium	0.0500	0.0541		mg/L		108	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Cadmium	0.0500	0.0509		mg/L		102	80 - 120
Calcium	5.00	5.02		mg/L		100	80 - 120
Chromium	0.0500	0.0523		mg/L		105	80 - 120
Cobalt	0.0500	0.0545		mg/L		109	80 - 120
Lead	0.0500	0.0517		mg/L		103	80 - 120
Lithium	0.0500	0.0557		mg/L		111	80 - 120
Molybdenum	0.0500	0.0493		mg/L		99	80 - 120
Selenium	0.0500	0.0489		mg/L		98	80 - 120
Thallium	0.0100	0.00966		mg/L		97	80 - 120

Lab Sample ID: 400-166110-H-3-C MS ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 430364

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0495		mg/L		99	75 - 125
Arsenic	0.0051		0.0500	0.0588		mg/L		107	75 - 125
Barium	0.025		0.0500	0.0768		mg/L		103	75 - 125
Beryllium	<0.00034		0.0500	0.0473		mg/L		95	75 - 125
Boron	2.0	E	0.100	2.13	E 4	mg/L		81	75 - 125
Cadmium	<0.00034		0.0500	0.0460		mg/L		92	75 - 125
Calcium	790	E	5.00	771	E 4	mg/L		-432	75 - 125
Chromium	<0.0011		0.0500	0.0516		mg/L		103	75 - 125

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-166110-H-3-C MS ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 430364

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Cobalt	0.0049		0.0500	0.0561		mg/L		102		75 - 125
Lead	<0.00035		0.0500	0.0543		mg/L		109		75 - 125
Lithium	0.17		0.0500	0.221		mg/L		104		75 - 125
Molybdenum	0.0094	J	0.0500	0.0629		mg/L		107		75 - 125
Selenium	<0.00071		0.0500	0.0537		mg/L		107		75 - 125
Thallium	<0.000085		0.0100	0.00980		mg/L		98		75 - 125

Lab Sample ID: 400-166110-H-3-D MSD ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 430364

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Antimony	<0.0010		0.0500	0.0504		mg/L		101		75 - 125	2	20
Arsenic	0.0051		0.0500	0.0599		mg/L		110		75 - 125	2	20
Barium	0.025		0.0500	0.0792		mg/L		108		75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0474		mg/L		95		75 - 125	0	20
Boron	2.0	E	0.100	2.14	E 4	mg/L		93		75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0483		mg/L		97		75 - 125	5	20
Calcium	790	E	5.00	785	E 4	mg/L		-152		75 - 125	2	20
Chromium	<0.0011		0.0500	0.0529		mg/L		106		75 - 125	3	20
Cobalt	0.0049		0.0500	0.0567		mg/L		104		75 - 125	1	20
Lead	<0.00035		0.0500	0.0544		mg/L		109		75 - 125	0	20
Lithium	0.17		0.0500	0.218		mg/L		98		75 - 125	1	20
Molybdenum	0.0094	J	0.0500	0.0634		mg/L		108		75 - 125	1	20
Selenium	<0.00071		0.0500	0.0545		mg/L		109		75 - 125	1	20
Thallium	<0.000085		0.0100	0.00977		mg/L		98		75 - 125	0	20

Lab Sample ID: MB 400-430366/1-A ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 430366

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		02/18/19 11:51	02/18/19 19:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/18/19 11:51	02/18/19 19:22	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/18/19 11:51	02/18/19 19:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 19:22	5
Boron	<0.021		0.050	0.021	mg/L		02/18/19 11:51	02/18/19 19:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/18/19 11:51	02/18/19 19:22	5
Calcium	<0.13		0.25	0.13	mg/L		02/18/19 11:51	02/18/19 19:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/18/19 11:51	02/18/19 19:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/18/19 11:51	02/18/19 19:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/18/19 11:51	02/18/19 19:22	5
Lithium	<0.0011		0.0050	0.0011	mg/L		02/18/19 11:51	02/18/19 19:22	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		02/18/19 11:51	02/18/19 19:22	5
Selenium	<0.00071		0.0013	0.00071	mg/L		02/18/19 11:51	02/18/19 19:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/18/19 11:51	02/18/19 19:22	5

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-430366/2-A
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 430366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0485		mg/L		97	80 - 120
Arsenic	0.0500	0.0490		mg/L		98	80 - 120
Barium	0.0500	0.0510		mg/L		102	80 - 120
Beryllium	0.0500	0.0472		mg/L		94	80 - 120
Boron	0.100	0.0956		mg/L		96	80 - 120
Cadmium	0.0500	0.0502		mg/L		100	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0500		mg/L		100	80 - 120
Lead	0.0500	0.0515		mg/L		103	80 - 120
Lithium	0.0500	0.0502		mg/L		100	80 - 120
Molybdenum	0.0500	0.0481		mg/L		96	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: 400-166134-L-7-B MS ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 430366

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0502		mg/L		100	75 - 125
Arsenic	0.016		0.0500	0.0659		mg/L		100	75 - 125
Barium	0.70		0.0500	0.764	4	mg/L		127	75 - 125
Beryllium	<0.00034		0.0500	0.0485		mg/L		97	75 - 125
Boron	0.41		0.100	0.498	4	mg/L		86	75 - 125
Cadmium	<0.00034		0.0500	0.0500		mg/L		100	75 - 125
Calcium	300	E	5.00	309	E 4	mg/L		84	75 - 125
Chromium	<0.0011		0.0500	0.0504		mg/L		101	75 - 125
Cobalt	0.00054	J	0.0500	0.0509		mg/L		101	75 - 125
Lead	<0.00035		0.0500	0.0517		mg/L		103	75 - 125
Lithium	0.027		0.0500	0.0770		mg/L		99	75 - 125
Molybdenum	<0.0020		0.0500	0.0513		mg/L		103	75 - 125
Selenium	<0.00071		0.0500	0.0519		mg/L		104	75 - 125
Thallium	<0.000085		0.0100	0.00978		mg/L		98	75 - 125

Lab Sample ID: 400-166134-L-7-C MSD ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 430366

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0496		mg/L		99	75 - 125	1	20
Arsenic	0.016		0.0500	0.0676		mg/L		104	75 - 125	3	20
Barium	0.70		0.0500	0.775	4	mg/L		150	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0484		mg/L		97	75 - 125	0	20
Boron	0.41		0.100	0.504	4	mg/L		92	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	3	20
Calcium	300	E	5.00	314	E 4	mg/L		191	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0506		mg/L		101	75 - 125	0	20

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-166134-L-7-C MSD ^5
Matrix: Water
Analysis Batch: 430473

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 430366

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	0.00054	J	0.0500	0.0514		mg/L		102	75 - 125	1	20
Lead	<0.00035		0.0500	0.0525		mg/L		105	75 - 125	2	20
Lithium	0.027		0.0500	0.0779		mg/L		101	75 - 125	1	20
Molybdenum	<0.0020		0.0500	0.0509		mg/L		102	75 - 125	1	20
Selenium	<0.00071		0.0500	0.0517		mg/L		103	75 - 125	0	20
Thallium	<0.000085		0.0100	0.00983		mg/L		98	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-430667/14-A
Matrix: Water
Analysis Batch: 430872

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430667

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		02/20/19 12:02	02/21/19 12:38	1

Lab Sample ID: LCS 400-430667/15-A
Matrix: Water
Analysis Batch: 430872

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430667

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00113		mg/L		112	80 - 120

Lab Sample ID: 400-166198-J-2-C MS
Matrix: Water
Analysis Batch: 430872

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 430667

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00183		mg/L		91	80 - 120

Lab Sample ID: 400-166198-J-2-D MSD
Matrix: Water
Analysis Batch: 430872

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 430667

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00181		mg/L		90	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 400-430370/1
Matrix: Water
Analysis Batch: 430370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			02/18/19 12:43	1

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 400-430370/2
Matrix: Water
Analysis Batch: 430370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	302		mg/L		103	78 - 122

Lab Sample ID: 400-165983-J-2 DU
Matrix: Water
Analysis Batch: 430370

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	130		128		mg/L		5	5

Lab Sample ID: MB 400-430406/1
Matrix: Water
Analysis Batch: 430406

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			02/18/19 14:53	1

Lab Sample ID: LCS 400-430406/2
Matrix: Water
Analysis Batch: 430406

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	266		mg/L		91	78 - 122

Lab Sample ID: 400-166039-T-2 DU
Matrix: Water
Analysis Batch: 430406

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	4600		4580		mg/L		0.4	5

Lab Sample ID: 400-166100-A-2 DU
Matrix: Water
Analysis Batch: 430406

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		68.0		mg/L		0	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-431213/6
Matrix: Water
Analysis Batch: 431213

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			02/25/19 11:27	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCS 400-431213/7
Matrix: Water
Analysis Batch: 431213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.3		mg/L		104	90 - 110

Lab Sample ID: MRL 400-431213/3
Matrix: Water
Analysis Batch: 431213

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.11		mg/L		105	50 - 150

Lab Sample ID: 400-166082-D-3 MS
Matrix: Water
Analysis Batch: 431213

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.7		10.0	20.7		mg/L		110	73 - 120

Lab Sample ID: 400-166082-D-3 MSD
Matrix: Water
Analysis Batch: 431213

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.7		10.0	20.3		mg/L		106	73 - 120	2	8

Lab Sample ID: MB 400-431575/6
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.4		2.0	1.4	mg/L			02/27/19 16:09	1

Lab Sample ID: LCS 400-431575/7
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.3		mg/L		104	90 - 110

Lab Sample ID: MRL 400-431575/3
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	2.36		mg/L		118	50 - 150

Lab Sample ID: 400-166225-F-4 MS
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.0		10.0	19.2		mg/L		112	73 - 120

TestAmerica Pensacola

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Lab Sample ID: 400-166225-F-4 MSD
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.0		10.0	19.2		mg/L		112	73 - 120	0	8

Lab Sample ID: 400-166263-B-1 MS
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.4		10.0	17.0		mg/L		116	73 - 120		

Lab Sample ID: 400-166263-B-1 MSD
Matrix: Water
Analysis Batch: 431575

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.4		10.0	16.5		mg/L		111	73 - 120	3	8

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-431013/3
Matrix: Water
Analysis Batch: 431013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.032		0.10	0.032	mg/L			02/22/19 13:06	1

Lab Sample ID: LCS 400-431013/4
Matrix: Water
Analysis Batch: 431013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	4.00	4.22		mg/L		106	90 - 110		

Lab Sample ID: 400-165917-A-1 MS
Matrix: Water
Analysis Batch: 431013

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.14		1.00	1.21		mg/L		107	75 - 125		

Lab Sample ID: 400-165917-A-1 MSD
Matrix: Water
Analysis Batch: 431013

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.14		1.00	1.21		mg/L		107	75 - 125	0	4

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 400-166095-8 DU
Matrix: Water
Analysis Batch: 431013

Client Sample ID: APMW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.98		1.04	F3	mg/L		6	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-431371/29
Matrix: Water
Analysis Batch: 431371

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			02/26/19 13:39	1

Lab Sample ID: LCS 400-431371/30
Matrix: Water
Analysis Batch: 431371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.6		mg/L		97	90 - 110

Lab Sample ID: MRL 400-431371/26
Matrix: Water
Analysis Batch: 431371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.92	J	mg/L		98	50 - 150

Lab Sample ID: 400-165970-A-1 MS
Matrix: Water
Analysis Batch: 431371

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	26		10.0	35.5		mg/L		98	77 - 128

Lab Sample ID: 400-165970-A-1 MSD
Matrix: Water
Analysis Batch: 431371

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	26		10.0	35.2		mg/L		95	77 - 128	1	5

Lab Sample ID: MB 400-431427/6
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.4		5.0	1.4	mg/L			02/26/19 17:32	1

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 400-431427/7
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	15.2		mg/L		101	90 - 110

Lab Sample ID: MRL 400-431427/3
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	5.07		mg/L		101	50 - 150

Lab Sample ID: 400-166225-F-1 MS
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	<1.4	F1 F2	10.0	8.19		mg/L		82	77 - 128

Lab Sample ID: 400-166225-F-1 MSD
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	<1.4	F1 F2	10.0	7.16	F1 F2	mg/L		72	77 - 128	13	5

Lab Sample ID: 400-166269-I-1 MS
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	54		10.0	60.8	4	mg/L		69	77 - 128

Lab Sample ID: 400-166269-I-1 MSD
Matrix: Water
Analysis Batch: 431427

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	54		10.0	61.6	4	mg/L		78	77 - 128	1	5

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-166095-1

SDG Number: Ash Pond

Login Number: 166095

List Number: 1

Creator: Conrady, Hank W

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C 1.1°C 1.1°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-1
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-166095-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR -Plant Watson

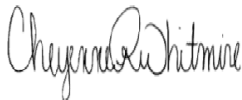
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:

3/19/2019 5:48:41 PM

Cheyenne Whitmire, Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Job ID: 400-166095-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-166095-2

RAD

Method(s) 9315: Ra-226 Prep Batch 160-416088. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11), FB-01 (400-166095-12), (LCS 160-416088/1-A), (LCSD 160-416088/2-A) and (MB 160-416088/22-A)

Method(s) 9320: Ra-228 Prep Batch 160-416092. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11), FB-01 (400-166095-12), (LCS 160-416092/1-A), (LCSD 160-416092/2-A) and (MB 160-416092/22-A)

Method(s) 9320: Ra-228 Prep Batch 160-416092. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11), FB-01 (400-166095-12), (LCS 160-416092/1-A), (LCSD 160-416092/2-A) and (MB 160-416092/22-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-416092. Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11) and FB-01 (400-166095-12). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-416088. Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (400-166095-1), APMW-2 (400-166095-2), APMW-3 (400-166095-3), APMW-4 (400-166095-4), APMW-5 (400-166095-5), APMW-6 (400-166095-6), APMW-7 (400-166095-7), APMW-8 (400-166095-8), APMW-9 (400-166095-9), APMW-10 (400-166095-10), DUP-01 (400-166095-11) and FB-01 (400-166095-12). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-166095-1	APMW-1	Water	02/13/19 14:13	02/14/19 17:43
400-166095-2	APMW-2	Water	02/13/19 13:55	02/14/19 17:43
400-166095-3	APMW-3	Water	02/13/19 12:40	02/14/19 17:43
400-166095-4	APMW-4	Water	02/13/19 11:10	02/14/19 17:43
400-166095-5	APMW-5	Water	02/13/19 08:25	02/14/19 17:43
400-166095-6	APMW-6	Water	02/13/19 11:45	02/14/19 17:43
400-166095-7	APMW-7	Water	02/13/19 10:46	02/14/19 17:43
400-166095-8	APMW-8	Water	02/13/19 09:38	02/14/19 17:43
400-166095-9	APMW-9	Water	02/13/19 08:45	02/14/19 17:43
400-166095-10	APMW-10	Water	02/13/19 07:45	02/14/19 17:43
400-166095-11	DUP-01	Water	02/13/19 06:45	02/14/19 17:43
400-166095-12	FB-01	Water	02/13/19 08:20	02/14/19 17:43

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 400-166095-1

Date Collected: 02/13/19 14:13

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.15		0.304	0.416	1.00	0.0858	pCi/L	02/21/19 13:30	03/15/19 05:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/21/19 13:30	03/15/19 05:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.35		0.388	0.496	1.00	0.321	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	95.0		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.50		0.493	0.647	5.00	0.321	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-2

Lab Sample ID: 400-166095-2

Date Collected: 02/13/19 13:55

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	12.2		0.577	1.24	1.00	0.0924	pCi/L	02/21/19 13:30	03/15/19 05:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/21/19 13:30	03/15/19 05:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.97		0.547	0.843	1.00	0.330	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	80.7		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	19.2		0.795	1.50	5.00	0.330	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 400-166095-3

Date Collected: 02/13/19 12:40

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.509		0.129	0.137	1.00	0.0938	pCi/L	02/21/19 13:30	03/15/19 05:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/21/19 13:30	03/15/19 05:41	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.16		0.524	0.772	1.00	0.340	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	84.5		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.67		0.540	0.784	5.00	0.340	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 400-166095-4

Date Collected: 02/13/19 11:10

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.739		0.153	0.167	1.00	0.0819	pCi/L	02/21/19 13:30	03/15/19 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					02/21/19 13:30	03/15/19 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.31		0.300	0.323	1.00	0.344	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	83.4		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.05		0.337	0.364	5.00	0.344	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 400-166095-5

Date Collected: 02/13/19 08:25

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.431		0.127	0.133	1.00	0.0994	pCi/L	02/21/19 13:30	03/15/19 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					02/21/19 13:30	03/15/19 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.10		0.501	0.627	1.00	0.430	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	80.0		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.53		0.517	0.641	5.00	0.430	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-6

Lab Sample ID: 400-166095-6

Date Collected: 02/13/19 11:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.608		0.154	0.164	1.00	0.133	pCi/L	02/21/19 13:30	03/15/19 05:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					02/21/19 13:30	03/15/19 05:39	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.10		0.358	0.407	1.00	0.356	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	86.4		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.71		0.390	0.439	5.00	0.356	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-7
Date Collected: 02/13/19 10:46
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-7
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.49		0.265	0.347	1.00	0.0930	pCi/L	02/21/19 13:30	03/15/19 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/21/19 13:30	03/15/19 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.70		0.426	0.545	1.00	0.351	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	84.1		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.19		0.502	0.646	5.00	0.351	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 400-166095-8

Date Collected: 02/13/19 09:38

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.970		0.175	0.195	1.00	0.0929	pCi/L	02/21/19 13:30	03/15/19 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/21/19 13:30	03/15/19 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.69		0.382	0.455	1.00	0.343	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	83.4		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.66		0.420	0.495	5.00	0.343	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-166095-9

Date Collected: 02/13/19 08:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.28		0.263	0.333	1.00	0.109	pCi/L	02/21/19 13:30	03/15/19 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/21/19 13:30	03/15/19 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.63		0.472	0.636	1.00	0.328	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	83.7		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.91		0.540	0.718	5.00	0.328	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 400-166095-10

Date Collected: 02/13/19 07:45

Matrix: Water

Date Received: 02/14/19 17:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.35		0.206	0.239	1.00	0.0739	pCi/L	02/21/19 13:30	03/15/19 07:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/21/19 13:30	03/15/19 07:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.61		0.316	0.349	1.00	0.332	pCi/L	02/21/19 13:58	03/07/19 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					02/21/19 13:58	03/07/19 15:23	1
Y Carrier	83.0		40 - 110					02/21/19 13:58	03/07/19 15:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.97		0.377	0.423	5.00	0.332	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: DUP-01
Date Collected: 02/13/19 06:45
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-11
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.34		0.208	0.240	1.00	0.102	pCi/L	02/21/19 13:30	03/15/19 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					02/21/19 13:30	03/15/19 07:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.56		0.314	0.345	1.00	0.332	pCi/L	02/21/19 13:58	03/07/19 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					02/21/19 13:58	03/07/19 15:24	1
Y Carrier	81.1		40 - 110					02/21/19 13:58	03/07/19 15:24	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.89		0.377	0.420	5.00	0.332	pCi/L		03/18/19 12:42	1

Client Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: FB-01
Date Collected: 02/13/19 08:20
Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-12
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0261	U	0.0341	0.0342	1.00	0.0928	pCi/L	02/21/19 13:30	03/15/19 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/21/19 13:30	03/15/19 07:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.162	U	0.183	0.184	1.00	0.301	pCi/L	02/21/19 13:58	03/07/19 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					02/21/19 13:58	03/07/19 15:24	1
Y Carrier	84.1		40 - 110					02/21/19 13:58	03/07/19 15:24	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.136	U	0.186	0.187	5.00	0.301	pCi/L		03/18/19 12:42	1

Definitions/Glossary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-1

Date Collected: 02/13/19 14:13

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 05:40	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-2

Date Collected: 02/13/19 13:55

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 05:40	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-3

Date Collected: 02/13/19 12:40

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 05:41	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-4

Date Collected: 02/13/19 11:10

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419465	03/15/19 05:39	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-5

Date Collected: 02/13/19 08:25

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419465	03/15/19 05:39	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-6

Date Collected: 02/13/19 11:45

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419465	03/15/19 05:39	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-7

Date Collected: 02/13/19 10:46

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-8

Date Collected: 02/13/19 09:38

Date Received: 02/14/19 17:43

Lab Sample ID: 400-166095-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Lab Chronicle

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 400-166095-9

Date Collected: 02/13/19 08:45

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: APMW-10

Lab Sample ID: 400-166095-10

Date Collected: 02/13/19 07:45

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:23	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-166095-11

Date Collected: 02/13/19 06:45

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:57	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:24	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Client Sample ID: FB-01

Lab Sample ID: 400-166095-12

Date Collected: 02/13/19 08:20

Matrix: Water

Date Received: 02/14/19 17:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			416088	02/21/19 13:30	SJC	TAL SL
Total/NA	Analysis	9315		1	419466	03/15/19 07:57	KLS	TAL SL
Total/NA	Prep	PrecSep_0			416092	02/21/19 13:58	SJC	TAL SL
Total/NA	Analysis	9320		1	418048	03/07/19 15:24	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	419804	03/18/19 12:42	CDR	TAL SL

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Rad

Prep Batch: 416088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	PrecSep-21	
400-166095-2	APMW-2	Total/NA	Water	PrecSep-21	
400-166095-3	APMW-3	Total/NA	Water	PrecSep-21	
400-166095-4	APMW-4	Total/NA	Water	PrecSep-21	
400-166095-5	APMW-5	Total/NA	Water	PrecSep-21	
400-166095-6	APMW-6	Total/NA	Water	PrecSep-21	
400-166095-7	APMW-7	Total/NA	Water	PrecSep-21	
400-166095-8	APMW-8	Total/NA	Water	PrecSep-21	
400-166095-9	APMW-9	Total/NA	Water	PrecSep-21	
400-166095-10	APMW-10	Total/NA	Water	PrecSep-21	
400-166095-11	DUP-01	Total/NA	Water	PrecSep-21	
400-166095-12	FB-01	Total/NA	Water	PrecSep-21	
MB 160-416088/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-416088/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-416088/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 416092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-166095-1	APMW-1	Total/NA	Water	PrecSep_0	
400-166095-2	APMW-2	Total/NA	Water	PrecSep_0	
400-166095-3	APMW-3	Total/NA	Water	PrecSep_0	
400-166095-4	APMW-4	Total/NA	Water	PrecSep_0	
400-166095-5	APMW-5	Total/NA	Water	PrecSep_0	
400-166095-6	APMW-6	Total/NA	Water	PrecSep_0	
400-166095-7	APMW-7	Total/NA	Water	PrecSep_0	
400-166095-8	APMW-8	Total/NA	Water	PrecSep_0	
400-166095-9	APMW-9	Total/NA	Water	PrecSep_0	
400-166095-10	APMW-10	Total/NA	Water	PrecSep_0	
400-166095-11	DUP-01	Total/NA	Water	PrecSep_0	
400-166095-12	FB-01	Total/NA	Water	PrecSep_0	
MB 160-416092/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-416092/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-416092/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-416088/22-A
Matrix: Water
Analysis Batch: 419466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416088

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04701	U	0.0586	0.0588	1.00	0.0967	pCi/L	02/21/19 13:30	03/15/19 07:58	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	104		40 - 110		02/21/19 13:30	03/15/19 07:58	1			

Lab Sample ID: LCS 160-416088/1-A
Matrix: Water
Analysis Batch: 419466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416088

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	11.15		1.15	1.00	0.103	pCi/L	98	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	102		40 - 110		02/21/19 13:30	03/15/19 07:58	1		

Lab Sample ID: LCSD 160-416088/2-A
Matrix: Water
Analysis Batch: 419466

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416088

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	11.23		1.16	1.00	0.0877	pCi/L	99	68 - 137	0.04	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	100		40 - 110		02/21/19 13:30	03/07/19 15:21	1				

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-416092/22-A
Matrix: Water
Analysis Batch: 418047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 416092

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.1328	U	0.205	0.205	1.00	0.385	pCi/L	02/21/19 13:58	03/07/19 15:21	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	104		40 - 110		02/21/19 13:58	03/07/19 15:21	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	85.2		40 - 110		02/21/19 13:58	03/07/19 15:21	1			

QC Sample Results

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
 SDG: Ash Pond

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-416092/1-A
Matrix: Water
Analysis Batch: 418048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 416092

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.42	10.07		1.15	1.00	0.379	pCi/L	107	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	78.5		40 - 110

Lab Sample ID: LCSD 160-416092/2-A
Matrix: Water
Analysis Batch: 418048

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 416092

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
Radium-228	9.42	9.478		1.09	1.00	0.357	pCi/L	101	56 - 140	0.26	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	100		40 - 110
Y Carrier	82.2		40 - 110

Chain of Custody Record

Client Information Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-992-7762(Tel) Email: CBSSELLER@SOUTHERNCO.COM Project Name: CCR -Plant Watson Site: Ash Pond		Lab PM: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking Net(s): Lab No: 400-73764-29084-1 Page: Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10347656 WO #: Project #: 40009375 SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Tl,7470A -Hg 4500 F.C - Fluoride, 2540C - TDS SM4500 Cl E - Chloride, SM4500 SO4 E - Sulfate, 9315 Ra226, 9320 Ra228, Ra226Ra228 GPPC Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Total Number of Containers:	
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=waste/oil, BT=Trislu, A=Air)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Special Instructions/Note: DUP-01		Special Instructions/Note: Special Instructions/QC Requirements:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: 1, II, III, IV, Other (specify)		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 2/14/19 1330 Company: ROTH		Received by: [Signature] Date/Time: 3:20 PM Company:	
Relinquished by: [Signature] Date/Time: 2/14/19 5:43pm Company: ROTH		Received by: [Signature] Date/Time: 2-14-19 1743 Company: TA	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.6, 1.1, 1.1, ER7	



Chain of Custody Record

Client Information Client Contact: <u>Mr. Cale Sellers</u> Southern Company Address: <u>PO BOX 2641 GSC8</u> City: <u>Birmingham</u> State, Zip: <u>AL, 35291</u> Phone: <u>205-992-7762(Tel)</u> Email: <u>CSSELLER@SOUTHERNCO.COM</u> Project Name: <u>CCR -Plant Watson</u> Site: <u>Ash Pond</u>		Lab P/M: <u>Whitmore, Cheyenne R</u> E-Mail: <u>cheyenne.whitmore@testamericainc.com</u> Carrier Tracking No(s): COC No: <u>400-73764-29084.2</u> Page: <u>Page 2 of 2</u> Job #:	
Due Date Requested: TAT Requested (days): PO #: <u>SCS10347656</u> WO #: <u>40009375</u> Project #: <u>40009375</u> SSOW#:		Analysis Requested 6020 - Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,Li,Mo,Se,Tl, T470A -Hg 4500 F, C - Fluoride, 2540C - TDS 5M4500 Cl, E - Chloride, 5M4500 SO4, F - Sulfate 9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc Perform MS/MSD (Yes or No)	
Sample Identification <u>FB-01</u>		Preservation Codes: A - HCL B - NaOH O - AsNaO2 D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Date: <u>2/13/19</u> Sample Time: <u>0830</u> Matrix: <u>Water</u> Sample Type (C=Comp, G=grab): <u>G</u> Field Filtered Sample (Yes or No): <u>X</u> Field Filtered Sample (Yes or No): <u>X</u>		Special Instructions/Note: Total Number of containers	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Relinquished by: <u>[Signature]</u> Relinquished by: <u>[Signature]</u> Relinquished by: <u>[Signature]</u>		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Date/Time: <u>2/14/19 1330</u> Date/Time: <u>5:13pm</u> Date/Time:		Method of Shipment: Received by: <u>[Signature]</u> Date/Time: <u>2/14/19 5:20pm</u> Company: <u>RSB</u> Received by: <u>[Signature]</u> Date/Time: <u>2-14-19 1743</u> Company: <u>TA</u> Received by:	
Empty Kit Relinquished by: Relinquished by:		Cooler Temperature(s) °C and Other Remarks:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-166095-2

SDG Number: Ash Pond

Login Number: 166095

List Number: 1

Creator: Conrady, Hank W

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C 1.1°C 1.1°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-166095-2

SDG Number: Ash Pond

Login Number: 166095

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 02/16/19 02:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
SDG: Ash Pond

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD / DOE		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19
Connecticut	State Program	1	PH-0241	03-31-19 *
Florida	NELAP	4	E87689	06-30-19
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR -Plant Watson

TestAmerica Job ID: 400-166095-2
 SDG: Ash Pond

Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19
New York	NELAP	2	11616	03-31-19 *
North Dakota	State Program	8	R207	06-30-19
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-19 *
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88664-1

Laboratory Sample Delivery Group: Ash Pond
Client Project/Site: CCR - Plant Watson

For:

Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
4/30/2019 5:58:08 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Job ID: 180-88664-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-88664-1**

Comments

No additional comments.

Receipt

The samples were received on 4/8/2019 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2° C and 3.2° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020, SM 2340B: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1 (180-88664-1), APMW-2 (180-88664-2), APMW-3 (180-88664-3), APMW-4 (180-88664-4), APMW-5 (180-88664-5), APMW-8 (180-88664-7), APMW-9 (180-88664-8), APMW-10 (180-88664-9), DUP-02 (180-88664-10) and DUP-03 (180-88664-11). Elevated reporting limits (RLs) are provided.

Method(s) 200.8, 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-436904 and analytical batch 400-437398 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page..

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
 SDG: Ash Pond

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88664-1	APMW-1	Water	04/05/19 09:34	04/08/19 18:51
180-88664-2	APMW-2	Water	04/05/19 11:04	04/08/19 18:51
180-88664-3	APMW-3	Water	04/05/19 13:02	04/08/19 18:51
180-88664-4	APMW-4	Water	04/05/19 08:35	04/08/19 18:51
180-88664-5	APMW-5	Water	04/04/19 16:10	04/08/19 18:51
180-88664-6	APMW-7	Water	04/04/19 14:15	04/08/19 18:51
180-88664-7	APMW-8	Water	04/04/19 12:20	04/08/19 18:51
180-88664-8	APMW-9	Water	04/04/19 10:35	04/08/19 18:51
180-88664-9	APMW-10	Water	04/04/19 08:10	04/08/19 18:51
180-88664-10	DUP-02	Water	04/04/19 11:20	04/08/19 18:51
180-88664-11	DUP-03	Water	04/05/19 10:04	04/08/19 18:51



Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 180-88664-1

Date Collected: 04/05/19 09:34

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			275293	04/10/19 18:22	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		50			275293	04/10/19 18:38	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/17/19 07:41	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/05/19 09:34	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-2

Lab Sample ID: 180-88664-2

Date Collected: 04/05/19 11:04

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			275570	04/12/19 07:15	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		50			275293	04/10/19 21:16	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/17/19 07:45	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275625	04/12/19 12:01	TAM	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/05/19 11:04	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-3

Lab Sample ID: 180-88664-3

Date Collected: 04/05/19 13:02

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25			275570	04/12/19 09:18	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		250			275293	04/11/19 01:29	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/17/19 07:49	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	275625	04/12/19 12:01	TAM	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/05/19 13:02	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-4

Lab Sample ID: 180-88664-4

Date Collected: 04/05/19 08:35

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			275293	04/10/19 22:19	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		10			275568	04/12/19 06:51	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25			437398	04/17/19 07:53	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275625	04/12/19 12:01	TAM	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/05/19 08:35	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-5

Lab Sample ID: 180-88664-5

Date Collected: 04/04/19 16:10

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25			275570	04/12/19 09:33	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		250			275293	04/11/19 02:32	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/17/19 07:57	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/04/19 16:10	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-7

Lab Sample ID: 180-88664-6

Date Collected: 04/04/19 14:15

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			275293	04/10/19 23:23	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		10			275568	04/12/19 07:07	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/17/19 04:07	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/04/19 14:15	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-8

Lab Sample ID: 180-88664-7

Date Collected: 04/04/19 12:20

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			275293	04/10/19 23:54	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		10			275568	04/12/19 07:23	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200			437398	04/17/19 08:01	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/04/19 12:20	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-9

Lab Sample ID: 180-88664-8

Date Collected: 04/04/19 10:35

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			275570	04/12/19 08:47	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		100			275293	04/11/19 00:26	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100			437398	04/17/19 08:05	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			276425	04/04/19 10:35	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: APMW-10

Lab Sample ID: 180-88664-9

Date Collected: 04/04/19 08:10

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2.5			275570	04/12/19 06:59	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		25			275293	04/10/19 20:45	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/17/19 04:19	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25			437398	04/17/19 08:09	DRE	TAL PEN
	Instrument ID: ICPMS7700									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-10

Lab Sample ID: 180-88664-9

Date Collected: 04/04/19 08:10

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
Total/NA	Analysis	Field Sampling		1			276425	04/04/19 08:10	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-02

Lab Sample ID: 180-88664-10

Date Collected: 04/04/19 11:20

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			275570	04/12/19 09:02	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		100			275293	04/11/19 00:58	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	200			437398	04/17/19 08:13	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275532	04/11/19 12:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-03

Lab Sample ID: 180-88664-11

Date Collected: 04/05/19 10:04

Matrix: Water

Date Received: 04/08/19 18:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			275570	04/12/19 07:30	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			275293	04/10/19 21:48	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436904	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/17/19 08:17	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275625	04/12/19 12:01	TAM	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

Batch Type: Analysis

DRE = Daniel Etscheid

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

FDS = Sampler Field

MJH = Matthew Hartman

TAM = Tessa Mastalski

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-1

Lab Sample ID: 180-88664-1

Date Collected: 04/05/19 09:34

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1700		50	36	mg/L			04/10/19 18:38	50
Fluoride	<0.13		1.0	0.13	mg/L			04/10/19 18:22	5
Sulfate	3.7	J	5.0	1.9	mg/L			04/10/19 18:22	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.50	0.21	mg/L		04/12/19 14:05	04/17/19 07:41	50
Calcium	240		2.5	1.3	mg/L		04/12/19 14:05	04/17/19 07:41	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3800		40	40	mg/L			04/11/19 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.14				SU			04/05/19 09:34	1

Client Sample ID: APMW-2

Lab Sample ID: 180-88664-2

Date Collected: 04/05/19 11:04

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2600		50	36	mg/L			04/10/19 21:16	50
Fluoride	0.14	J	1.0	0.13	mg/L			04/12/19 07:15	5
Sulfate	7.0		5.0	1.9	mg/L			04/12/19 07:15	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.50	0.21	mg/L		04/12/19 14:05	04/17/19 07:45	50
Calcium	310		2.5	1.3	mg/L		04/12/19 14:05	04/17/19 07:45	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5000		100	100	mg/L			04/12/19 12:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.03				SU			04/05/19 11:04	1

Client Sample ID: APMW-3

Lab Sample ID: 180-88664-3

Date Collected: 04/05/19 13:02

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9900		250	180	mg/L			04/11/19 01:29	250
Fluoride	0.70	J	5.0	0.66	mg/L			04/12/19 09:18	25
Sulfate	1200		25	9.5	mg/L			04/12/19 09:18	25

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-3

Lab Sample ID: 180-88664-3

Date Collected: 04/05/19 13:02

Matrix: Water

Date Received: 04/08/19 18:51

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.5		0.50	0.21	mg/L	-	04/12/19 14:05	04/17/19 07:49	50
Calcium	290		2.5	1.3	mg/L	-	04/12/19 14:05	04/17/19 07:49	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18000		200	200	mg/L	-		04/12/19 12:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.70				SU	-		04/05/19 13:02	1

Client Sample ID: APMW-4

Lab Sample ID: 180-88664-4

Date Collected: 04/05/19 08:35

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3900		100	71	mg/L	-		04/10/19 22:19	100
Fluoride	0.31	J	2.0	0.26	mg/L	-		04/12/19 06:51	10
Sulfate	330		10	3.8	mg/L	-		04/12/19 06:51	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6		0.25	0.11	mg/L	-	04/12/19 14:05	04/17/19 07:53	25
Calcium	170		1.3	0.63	mg/L	-	04/12/19 14:05	04/17/19 07:53	25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7000		100	100	mg/L	-		04/12/19 12:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.33				SU	-		04/05/19 08:35	1

Client Sample ID: APMW-5

Lab Sample ID: 180-88664-5

Date Collected: 04/04/19 16:10

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8600		250	180	mg/L	-		04/11/19 02:32	250
Fluoride	<0.66		5.0	0.66	mg/L	-		04/12/19 09:33	25
Sulfate	1100		25	9.5	mg/L	-		04/12/19 09:33	25

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.8		0.50	0.21	mg/L	-	04/12/19 14:05	04/17/19 07:57	50
Calcium	270		2.5	1.3	mg/L	-	04/12/19 14:05	04/17/19 07:57	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	18000		200	200	mg/L	-		04/11/19 12:25	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-5

Lab Sample ID: 180-88664-5

Date Collected: 04/04/19 16:10

Matrix: Water

Date Received: 04/08/19 18:51

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.35				SU			04/04/19 16:10	1

Client Sample ID: APMW-7

Lab Sample ID: 180-88664-6

Date Collected: 04/04/19 14:15

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3700		100	71	mg/L			04/10/19 23:23	100
Fluoride	<0.26		2.0	0.26	mg/L			04/12/19 07:07	10
Sulfate	61		10	3.8	mg/L			04/12/19 07:07	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.98		0.050	0.021	mg/L		04/12/19 14:05	04/17/19 04:07	5
Calcium	98		0.25	0.13	mg/L		04/12/19 14:05	04/17/19 04:07	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8100		100	100	mg/L			04/11/19 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.33				SU			04/04/19 14:15	1

Client Sample ID: APMW-8

Lab Sample ID: 180-88664-7

Date Collected: 04/04/19 12:20

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3500		100	71	mg/L			04/10/19 23:54	100
Fluoride	0.58	J	2.0	0.26	mg/L			04/12/19 07:23	10
Sulfate	640		10	3.8	mg/L			04/12/19 07:23	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	20		2.0	0.84	mg/L		04/12/19 14:05	04/17/19 08:01	200
Calcium	440		10	5.0	mg/L		04/12/19 14:05	04/17/19 08:01	200

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7700		100	100	mg/L			04/11/19 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.72				SU			04/04/19 12:20	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: APMW-9

Lab Sample ID: 180-88664-8

Date Collected: 04/04/19 10:35

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3100		100	71	mg/L			04/11/19 00:26	100
Fluoride	<0.26		2.0	0.26	mg/L			04/12/19 08:47	10
Sulfate	330		10	3.8	mg/L			04/12/19 08:47	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.1		1.0	0.42	mg/L		04/12/19 14:05	04/17/19 08:05	100
Calcium	270		5.0	2.5	mg/L		04/12/19 14:05	04/17/19 08:05	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4500		100	100	mg/L			04/11/19 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.17				SU			04/04/19 10:35	1

Client Sample ID: APMW-10

Lab Sample ID: 180-88664-9

Date Collected: 04/04/19 08:10

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		25	18	mg/L			04/10/19 20:45	25
Fluoride	0.63		0.50	0.066	mg/L			04/12/19 06:59	2.5
Sulfate	240		2.5	0.95	mg/L			04/12/19 06:59	2.5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	80		0.25	0.13	mg/L		04/12/19 14:05	04/17/19 04:19	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.25	0.11	mg/L		04/12/19 14:05	04/17/19 08:09	25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2500		40	40	mg/L			04/11/19 12:25	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.74				SU			04/04/19 08:10	1

Client Sample ID: DUP-02

Lab Sample ID: 180-88664-10

Date Collected: 04/04/19 11:20

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2900		100	71	mg/L			04/11/19 00:58	100
Fluoride	0.87 J		2.0	0.26	mg/L			04/12/19 09:02	10
Sulfate	550		10	3.8	mg/L			04/12/19 09:02	10

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Client Sample ID: DUP-02

Lab Sample ID: 180-88664-10

Date Collected: 04/04/19 11:20

Matrix: Water

Date Received: 04/08/19 18:51

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19		2.0	0.84	mg/L		04/12/19 14:05	04/17/19 08:13	200
Calcium	500		10	5.0	mg/L		04/12/19 14:05	04/17/19 08:13	200

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7800		100	100	mg/L			04/11/19 12:25	1

Client Sample ID: DUP-03

Lab Sample ID: 180-88664-11

Date Collected: 04/05/19 10:04

Matrix: Water

Date Received: 04/08/19 18:51

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2500		50	36	mg/L			04/10/19 21:48	50
Fluoride	<0.13		1.0	0.13	mg/L			04/12/19 07:30	5
Sulfate	6.7		5.0	1.9	mg/L			04/12/19 07:30	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.50	0.21	mg/L		04/12/19 14:05	04/17/19 08:17	50
Calcium	310		2.5	1.3	mg/L		04/12/19 14:05	04/17/19 08:17	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5100		100	100	mg/L			04/12/19 12:01	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275293/49
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 20:13	1

Lab Sample ID: MB 180-275293/5
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 05:49	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 05:49	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 05:49	1

Lab Sample ID: LCS 180-275293/48
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	48.1		mg/L		96	90 - 110

Lab Sample ID: LCS 180-275293/6
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Fluoride	2.50	2.40		mg/L		96	90 - 110
Sulfate	50.0	49.5		mg/L		99	90 - 110

Lab Sample ID: MB 180-275568/5
Matrix: Water
Analysis Batch: 275568

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			04/12/19 05:22	1
Sulfate	<0.38		1.0	0.38	mg/L			04/12/19 05:22	1

Lab Sample ID: LCS 180-275568/6
Matrix: Water
Analysis Batch: 275568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.15		mg/L		92	90 - 110
Sulfate	25.0	24.9		mg/L		100	90 - 110

Lab Sample ID: MB 180-275570/6
Matrix: Water
Analysis Batch: 275570

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			04/12/19 05:43	1
Sulfate	<0.38		1.0	0.38	mg/L			04/12/19 05:43	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 180-275570/5
Matrix: Water
Analysis Batch: 275570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.29		mg/L		103	90 - 110
Sulfate	25.0	26.2		mg/L		105	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436904/1-A ^5
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/12/19 14:05	04/17/19 02:51	5
Calcium	<0.13		0.25	0.13	mg/L		04/12/19 14:05	04/17/19 02:51	5

Lab Sample ID: LCS 400-436904/2-A
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.0990		mg/L		99	80 - 120
Calcium	5.00	4.85		mg/L		97	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-275532/2
Matrix: Water
Analysis Batch: 275532

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/11/19 12:25	1

Lab Sample ID: LCS 180-275532/1
Matrix: Water
Analysis Batch: 275532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	170		mg/L		85	80 - 120

Lab Sample ID: MB 180-275625/2
Matrix: Water
Analysis Batch: 275625

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/12/19 12:01	1

Lab Sample ID: LCS 180-275625/1
Matrix: Water
Analysis Batch: 275625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	208		mg/L		103	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 275293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-1	APMW-1	Total/NA	Water	300.0	
180-88664-1	APMW-1	Total/NA	Water	300.0	
180-88664-2	APMW-2	Total/NA	Water	300.0	
180-88664-3	APMW-3	Total/NA	Water	300.0	
180-88664-4	APMW-4	Total/NA	Water	300.0	
180-88664-5	APMW-5	Total/NA	Water	300.0	
180-88664-6	APMW-7	Total/NA	Water	300.0	
180-88664-7	APMW-8	Total/NA	Water	300.0	
180-88664-8	APMW-9	Total/NA	Water	300.0	
180-88664-9	APMW-10	Total/NA	Water	300.0	
180-88664-10	DUP-02	Total/NA	Water	300.0	
180-88664-11	DUP-03	Total/NA	Water	300.0	
MB 180-275293/49	Method Blank	Total/NA	Water	300.0	
MB 180-275293/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275293/48	Lab Control Sample	Total/NA	Water	300.0	
LCS 180-275293/6	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 275568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-4	APMW-4	Total/NA	Water	300.0	
180-88664-6	APMW-7	Total/NA	Water	300.0	
180-88664-7	APMW-8	Total/NA	Water	300.0	
MB 180-275568/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275568/6	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 275570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-2	APMW-2	Total/NA	Water	300.0	
180-88664-3	APMW-3	Total/NA	Water	300.0	
180-88664-5	APMW-5	Total/NA	Water	300.0	
180-88664-8	APMW-9	Total/NA	Water	300.0	
180-88664-9	APMW-10	Total/NA	Water	300.0	
180-88664-10	DUP-02	Total/NA	Water	300.0	
180-88664-11	DUP-03	Total/NA	Water	300.0	
MB 180-275570/6	Method Blank	Total/NA	Water	300.0	
LCS 180-275570/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 436904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-1 - DL	APMW-1	Total Recoverable	Water	3005A	
180-88664-2 - DL	APMW-2	Total Recoverable	Water	3005A	
180-88664-3 - DL	APMW-3	Total Recoverable	Water	3005A	
180-88664-4 - DL	APMW-4	Total Recoverable	Water	3005A	
180-88664-5 - DL	APMW-5	Total Recoverable	Water	3005A	
180-88664-6	APMW-7	Total Recoverable	Water	3005A	
180-88664-7 - DL	APMW-8	Total Recoverable	Water	3005A	
180-88664-8 - DL	APMW-9	Total Recoverable	Water	3005A	
180-88664-9 - DL	APMW-10	Total Recoverable	Water	3005A	
180-88664-9	APMW-10	Total Recoverable	Water	3005A	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Metals (Continued)

Prep Batch: 436904 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-10 - DL	DUP-02	Total Recoverable	Water	3005A	
180-88664-11 - DL	DUP-03	Total Recoverable	Water	3005A	
MB 400-436904/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436904/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 437398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-1 - DL	APMW-1	Total Recoverable	Water	6020	436904
180-88664-2 - DL	APMW-2	Total Recoverable	Water	6020	436904
180-88664-3 - DL	APMW-3	Total Recoverable	Water	6020	436904
180-88664-4 - DL	APMW-4	Total Recoverable	Water	6020	436904
180-88664-5 - DL	APMW-5	Total Recoverable	Water	6020	436904
180-88664-6	APMW-7	Total Recoverable	Water	6020	436904
180-88664-7 - DL	APMW-8	Total Recoverable	Water	6020	436904
180-88664-8 - DL	APMW-9	Total Recoverable	Water	6020	436904
180-88664-9	APMW-10	Total Recoverable	Water	6020	436904
180-88664-9 - DL	APMW-10	Total Recoverable	Water	6020	436904
180-88664-10 - DL	DUP-02	Total Recoverable	Water	6020	436904
180-88664-11 - DL	DUP-03	Total Recoverable	Water	6020	436904
MB 400-436904/1-A ^5	Method Blank	Total Recoverable	Water	6020	436904
LCS 400-436904/2-A	Lab Control Sample	Total Recoverable	Water	6020	436904

General Chemistry

Analysis Batch: 275532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-1	APMW-1	Total/NA	Water	SM 2540C	
180-88664-5	APMW-5	Total/NA	Water	SM 2540C	
180-88664-6	APMW-7	Total/NA	Water	SM 2540C	
180-88664-7	APMW-8	Total/NA	Water	SM 2540C	
180-88664-8	APMW-9	Total/NA	Water	SM 2540C	
180-88664-9	APMW-10	Total/NA	Water	SM 2540C	
180-88664-10	DUP-02	Total/NA	Water	SM 2540C	
MB 180-275532/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-275532/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 275625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-2	APMW-2	Total/NA	Water	SM 2540C	
180-88664-3	APMW-3	Total/NA	Water	SM 2540C	
180-88664-4	APMW-4	Total/NA	Water	SM 2540C	
180-88664-11	DUP-03	Total/NA	Water	SM 2540C	
MB 180-275625/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-275625/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 276425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-1	APMW-1	Total/NA	Water	Field Sampling	
180-88664-2	APMW-2	Total/NA	Water	Field Sampling	
180-88664-3	APMW-3	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88664-1
SDG: Ash Pond

Field Service / Mobile Lab (Continued)

Analysis Batch: 276425 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88664-4	APMW-4	Total/NA	Water	Field Sampling	
180-88664-5	APMW-5	Total/NA	Water	Field Sampling	
180-88664-6	APMW-7	Total/NA	Water	Field Sampling	
180-88664-7	APMW-8	Total/NA	Water	Field Sampling	
180-88664-8	APMW-9	Total/NA	Water	Field Sampling	
180-88664-9	APMW-10	Total/NA	Water	Field Sampling	

- 1
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- 6
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- 10
- 11
- 12
- 13

Align FedEx Pouch Here



SDR

ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR18
ACTWGT: 52.80 LB
CAD: 006993800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

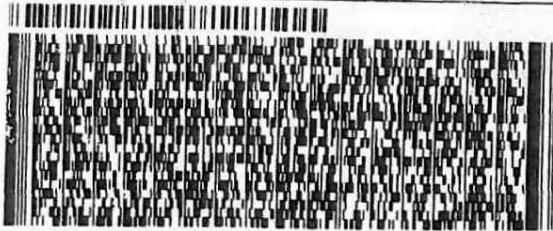
0 SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

15238

Handwritten signatures and initials

(412) 983-7058
INU:
PO:

REF:
DEPT:



SDR

FedEx Saturday Delivery

151967 REV 7/08 RRD

1 of 2
TRK# 7864 7555 6581
0201
MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

FedEx
TRK# 7864 7555 6581
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

Melted Pel 15238
PA-US
PIT

Uncorrected temp
Thermometer ID
CF 0 Initials
PT-WI-SR-001 effective 11/8/18

11.2 °C
10
MD

FID 186442 08APR19 PITA 555117/15/0808

SDR

FedEx Saturday Delivery

1
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SDR



180-88664 Waybill

FedEx Express

RT NEW 12:01
FZ

Do Not Lift Using This Tag

FedEx Express

SDR

FedEx Saturday Delivery

151967 REV 7/08 RRD

ORIGIN ID: 81KA (850) 336-0193
RICK HAGENORFEN
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR19
ACTWT: 53.00 LB
CAD: 006993800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

0 SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

15238
[Handwritten Signature]

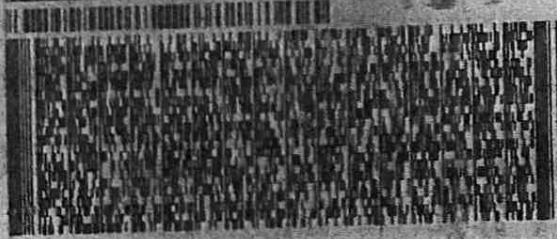
(412) 963-7069

56511/07E5/23RD

FedEx Saturday Delivery

FedEx Express

SDR



FedEx Express



1107010-1101

2 of 2

MPS# 7864 7555 6592
0263
Metr# 7864 7555 6581

SATURDAY 12:00
PRIORITY OVERNIGHT

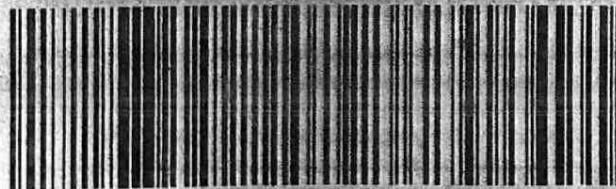
FedEx 2 of 2

MPS# 7864 7555 6592
0263

TUE - 09 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 106442 08APR19 PITA 553C1/D7E5/6C8A

Uncorrected temp
Thermometer ID

13.2 °C
10

Initials

NO

CF

PT-WI-SM-001 effective 11/6/18

Delivery

DF

151967 REV 7/08 RRD

- 1
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- 13



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact: Shipping/Receiving		Bortol, Veronica		Bortol, Veronica		State of Origin: Georgia		180-359679.1	
Company: TestAmerica Laboratories, Inc.		E-Mail: veronica.bortol@testamericainc.com		E-Mail: veronica.bortol@testamericainc.com		Page: 1 of 2		Job #: 180-88664-1	
Address: 3355 McLemore Drive, Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Due Date Requested: 4/11/2019		TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project Name: CCR - Plant Watson Site:		PO #:		WO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Project #: 18020186 SSOW#:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=air)	
Sample Identification - Client ID (Lab ID)		Preservation Code:		6020/3005A Boron & calcium		Total Number of containers		Special Instructions/Note:	
APMW-1 (180-88664-1)	4/5/19	09:34 Eastern	Water	X	X	1			
APMW-2 (180-88664-2)	4/5/19	11:04 Eastern	Water	X	X	1			
APMW-3 (180-88664-3)	4/5/19	13:02 Eastern	Water	X	X	1			
APMW-4 (180-88664-4)	4/5/19	08:35 Eastern	Water	X	X	1			
APMW-5 (180-88664-5)	4/4/19	16:10 Eastern	Water	X	X	1			
APMW-7 (180-88664-6)	4/4/19	14:15 Eastern	Water	X	X	1			
APMW-8 (180-88664-7)	4/4/19	12:20 Eastern	Water	X	X	1			
APMW-9 (180-88664-8)	4/4/19	10:35 Eastern	Water	X	X	1			
APMW-10 (180-88664-9)	4/4/19	08:10 Eastern	Water	X	X	1			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *[Signature]* Date/Time: 4/10/19 1700 Company: TATA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks: 0, 3°C FR



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88664-1

SDG Number: Ash Pond

Login Number: 88664

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88664-1

SDG Number: Ash Pond

Login Number: 88664

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/11/19 04:59 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3°C IR 7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-87808-1

Client Project/Site: CCR - Plant Watson

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/27/2019 8:16:58 AM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

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results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Job ID: 180-87808-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-87808-1

Comments

No additional comments.

Receipt

The samples were received on 3/19/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.1° C.

Anions

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-273639 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1R (180-87808-1),

Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page..

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Laboratory: TestAmerica Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-87808-1	APMW-1R	Water	03/16/19 11:55	03/19/19 09:15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Client Sample ID: APMW-1R

Lab Sample ID: 180-87808-1

Date Collected: 03/16/19 11:55

Matrix: Water

Date Received: 03/19/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			273639	03/22/19 21:32	CMR	TAL PIT
		Instrument ID: CHICS2100B								
Total/NA	Analysis	300.0		50			273639	03/22/19 21:48	CMR	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			434330	03/22/19 00:24	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			434486	03/22/19 15:17	DRE	TAL PEN
		Instrument ID: ICPMS7700								
Total/NA	Prep	7470A			40 mL	40 mL	434522	03/25/19 11:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1			434760	03/26/19 15:25	JAP	TAL PEN
		Instrument ID: HYDRA AA2								
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	273603	03/21/19 15:39	TAM	TAL PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Field Sampling		1			273610	03/16/19 11:55	FDS	TAL PIT
		Instrument ID: NOEQUIP								

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

CMR = Carl Reagle

FDS = Sampler Field

TAM = Tessa Mastalski

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Client Sample ID: APMW-1R

Lab Sample ID: 180-87808-1

Date Collected: 03/16/19 11:55

Matrix: Water

Date Received: 03/19/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			03/22/19 21:48	50
Fluoride	<0.13		1.0	0.13	mg/L			03/22/19 21:32	5
Sulfate	14		5.0	1.9	mg/L			03/22/19 21:32	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0021		0.0013	0.00046	mg/L		03/21/19 12:30	03/22/19 00:24	5
Barium	0.89		0.0025	0.00049	mg/L		03/21/19 12:30	03/22/19 00:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:24	5
Cobalt	0.00057	J	0.0025	0.00040	mg/L		03/21/19 12:30	03/22/19 00:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/19 12:30	03/22/19 00:24	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		03/21/19 12:30	03/22/19 00:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/21/19 12:30	03/22/19 00:24	5
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/19 12:30	03/22/19 00:24	5
Selenium	<0.00071		0.0013	0.00071	mg/L		03/21/19 12:30	03/22/19 00:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/19 12:30	03/22/19 00:24	5
Lithium	0.013		0.0050	0.0011	mg/L		03/21/19 12:30	03/22/19 00:24	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.5		0.50	0.21	mg/L		03/21/19 12:30	03/22/19 15:17	50
Calcium	130000		2500	1300	ug/L		03/21/19 12:30	03/22/19 15:17	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/25/19 11:37	03/26/19 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		40	40	mg/L			03/21/19 15:39	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.67				SU			03/16/19 11:55	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-273639/6
Matrix: Water
Analysis Batch: 273639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			03/22/19 14:24	1
Fluoride	<0.026		0.20	0.026	mg/L			03/22/19 14:24	1
Sulfate	<0.38		1.0	0.38	mg/L			03/22/19 14:24	1

Lab Sample ID: LCS 180-273639/5
Matrix: Water
Analysis Batch: 273639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.7		mg/L		107	90 - 110
Fluoride	1.25	1.27		mg/L		102	90 - 110
Sulfate	25.0	26.5		mg/L		106	90 - 110

Lab Sample ID: 180-87808-3 MS
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.3		25.0	34.5		mg/L		101	80 - 120
Fluoride	0.047	J F1	1.25	1.86	F1	mg/L		145	80 - 120
Sulfate	3.6		25.0	29.1		mg/L		102	80 - 120

Lab Sample ID: 180-87808-3 MSD
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.3		25.0	34.1		mg/L		99	80 - 120	1	20
Fluoride	0.047	J F1	1.25	1.84	F1	mg/L		144	80 - 120	1	20
Sulfate	3.6		25.0	28.7		mg/L		101	80 - 120	1	20

Lab Sample ID: 180-87808-4 MS
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		25.0	40.4		mg/L		104	80 - 120
Fluoride	0.041	J F1	1.25	1.86	F1	mg/L		145	80 - 120
Sulfate	0.88	J	25.0	26.5		mg/L		102	80 - 120

Lab Sample ID: 180-87808-4 MSD
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	14		25.0	39.4		mg/L		100	80 - 120	2	20
Fluoride	0.041	J F1	1.25	1.78	F1	mg/L		139	80 - 120	4	20
Sulfate	0.88	J	25.0	26.0		mg/L		101	80 - 120	2	20

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-273746/6
Matrix: Water
Analysis Batch: 273746

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			03/23/19 10:27	1
Fluoride	<0.026		0.20	0.026	mg/L			03/23/19 10:27	1
Sulfate	<0.38		1.0	0.38	mg/L			03/23/19 10:27	1

Lab Sample ID: LCS 180-273746/5
Matrix: Water
Analysis Batch: 273746

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Fluoride	1.25	1.28		mg/L		102	90 - 110
Sulfate	25.0	26.3		mg/L		105	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-434144/1-A ^5
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/21/19 12:30	03/21/19 22:43	5
Boron	<0.021		0.050	0.021	mg/L		03/21/19 12:30	03/21/19 22:43	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/21/19 12:30	03/21/19 22:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/21/19 22:43	5
Calcium	<130		250	130	ug/L		03/21/19 12:30	03/21/19 22:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/21/19 22:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/21/19 12:30	03/21/19 22:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/19 12:30	03/21/19 22:43	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		03/21/19 12:30	03/21/19 22:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/21/19 12:30	03/21/19 22:43	5
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/19 12:30	03/21/19 22:43	5
Selenium	<0.00071		0.0013	0.00071	mg/L		03/21/19 12:30	03/21/19 22:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/19 12:30	03/21/19 22:43	5
Lithium	<0.0011		0.0050	0.0011	mg/L		03/21/19 12:30	03/21/19 22:43	5

Lab Sample ID: LCS 400-434144/2-A
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Barium	0.0500	0.0488		mg/L		98	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Calcium	5000	4720		ug/L		94	80 - 120
Cadmium	0.0500	0.0482		mg/L		96	80 - 120
Cobalt	0.0500	0.0502		mg/L		100	80 - 120
Chromium	0.0500	0.0483		mg/L		97	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-434144/2-A
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0490		mg/L		98	80 - 120
Antimony	0.0500	0.0474		mg/L		95	80 - 120
Selenium	0.0500	0.0466		mg/L		93	80 - 120
Thallium	0.0100	0.00971		mg/L		97	80 - 120
Lithium	0.0500	0.0517		mg/L		103	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-273603/2
Matrix: Water
Analysis Batch: 273603

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/21/19 15:39	1

Lab Sample ID: LCS 180-273603/1
Matrix: Water
Analysis Batch: 273603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	304	262		mg/L		86	80 - 120

Lab Sample ID: MB 180-273609/2
Matrix: Water
Analysis Batch: 273609

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/21/19 18:00	1

Lab Sample ID: LCS 180-273609/1
Matrix: Water
Analysis Batch: 273609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	304	290		mg/L		95	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

HPLC/IC

Analysis Batch: 273639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	300.0	
180-87808-1	APMW-1R	Total/NA	Water	300.0	

Metals

Prep Batch: 434144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total Recoverable	Water	3005A	
180-87808-1 - DL	APMW-1R	Total Recoverable	Water	3005A	

Analysis Batch: 434330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total Recoverable	Water	6020	434144

Analysis Batch: 434486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1 - DL	APMW-1R	Total Recoverable	Water	6020	434144

Prep Batch: 434522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	7470A	

Analysis Batch: 434760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	7470A	434522

General Chemistry

Analysis Batch: 273603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 273610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	Field Sampling	

101 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Client Information
 Client Contact: Corey Ladner
 Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: _____
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site: _____

Sampler: Traver Brodock
 Lab PIA: Bortot, Veronica
 E-Mail: veronica.bortot@testamericainc.com
 Carrier Tracking No(s): _____
 COC No: 180-50333-10589.1
 Page: Page 1 of 1
 Job #: _____

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water, ST=Steam, AA=Air)	Flit Filtered Sample (Yes or No)	Preservation Code	Special
APNW-1R	3/16/19	1155	G	Water	X	D	
APNW-1		1016		Water	X	N	
PZ-1		1315		Water	X		
PZ-2		1605		Water	X		
Dup-01		1016		Water	X		
EB-01		1505		Water	X		
EB-01		1505		Water	X		

Analysis Requested

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: _____

Preservation Codes:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Method of Shipment: _____

Received by: Phillie Watson 3-19-19
 Date/Time: _____
 Company: _____

Received by: RDH 3/17/19 1630
 Date/Time: _____
 Company: _____

Received by: _____
 Date/Time: _____
 Company: _____

Custody Seals Intact: Yes No
 Custody Seal No.: _____

Client Information
 Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: [blank]
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site: [blank]

Sampler: Travis Bradstock
 Lab PM: Bortot, Veronica
 E-Mail: veronica_bortot@testamericainc.com

Carrier Tracking No(s): [blank]

COC No: 180-50333-10589.1
 Page: Page 1 of 1
 Job #:

Due Date Requested: [blank]
 TAT Requested (days): [blank]
 PO #: SCS10382606
 WO #: [blank]
 Project #: 18020186
 SSOW#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Spec
APNW-1R	2/16/19	1155	G	Water	
APNW-1		1016		Water	
PZ-1		1315		Water	
PZ-2		1605		Water	
Dup-01		1016		Water	
FB-01		1505		Water	
EB-01		1505		Water	

6020, 7470A
 2540C_Calcd, 300_ORGFM_28D

Barcode: 180-87808 Chain of Custody

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: [blank]

M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Z - other (specify)

Analysis Requested: [blank]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: [blank]

Empty Kit Relinquished by: [blank] Date: [blank]
 Relinquished by: Travis Bradstock Date/Time: 3/17/19 1630
 Relinquished by: [blank] Date/Time: [blank]
 Relinquished by: [blank] Date/Time: [blank]

Method of Shipment: [blank]
 Received by: Phillie Watson Date/Time: 3-19-19
 Received by: [blank] Date/Time: 3/15
 Received by: [blank] Date/Time: [blank]

Company: RDH
 Company: [blank]
 Company: [blank]

Custody Seals Intact: Yes No
 Custody Seal No.: [blank]
 Cooler Temperature(s) °C and Other Remarks: [blank]



ORIGIN ID:PNSA (850) 994-7469
TREVOR BADDOCK
RDH ENVIROMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWT: 65.00 LB
CAD: 006994796/SSFE1922
DIMS: 24x14x15 IN

PAGE, FL 32571
UNITED STATES US

BILL CREDIT CARD

TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

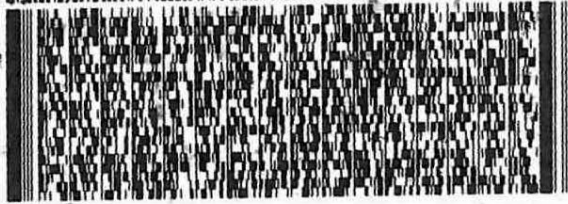
PITTSBURGH PA 15238

(412) 969-7068

REF:

INV:

DEPT:



FedEx
Express



2 of 2

MPS# 7861 0239 4377

Mstr# 7861 0239 4366

0201

TUE - 19 MAR 10:30A
PRIORITY OVERNIGHT

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

11 °C
10

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18



180-87808 Waybill

Do Not Lift Using This Tag

Recipient's Name <i>Please print.</i>	Phone Number
Test America	(412) 963-7058
Company	Dept./Floor/Suite/Room
Test America	
Street Address <i>We cannot deliver to P.O. boxes or P.O. ZIP codes.</i>	
301 ALPHA DR	

ORIGIN ID:PNNSA (850) 994-7469
TREVOR BADDOCK
RDH ENVIRONMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWGT: 59.80 LB
CAD: 006994796/SSFE1922
DIMS: 26x13x14 IN

PACE, FL 32571
UNITED STATES US

BILL CREDIT CARD

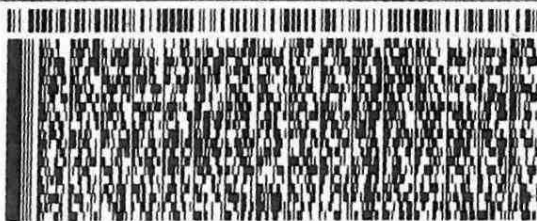
TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

PITTSBURGH PA 15238

(412) 963-7058
PHU:
PD:

REF:

DEPT:



FedEx
Express



1 of 2
TRK# 7861 0239 4366
0201

TUE - 19 MAR 10:30A
PRIORITY OVERNIGHT

MASTER

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

1.8
10 °C

CF Initials

TB

PT-WI-SR-001 effective 11/8/18



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-1

Login Number: 87808

List Number: 1

Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-1

Login Number: 87808
List Number: 2
Creator: Brown, Nathan

List Source: TestAmerica Pensacola
List Creation: 03/20/19 04:34 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-87808-1

TestAmerica Sample Delivery Group: 1

Client Project/Site: CCR - Plant Watson

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/27/2019 8:32:42 AM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

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results through

TotalAccess

Have a Question?



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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



Table of Contents

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Job ID: 180-87808-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-87808-1

Comments

No additional comments.

Receipt

The samples were received on 3/19/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.1° C.

Anions

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-273639 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020:

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page..

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Laboratory: TestAmerica Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-87808-3	PZ-1	Water	03/16/19 13:15	03/19/19 09:15
180-87808-4	PZ-2	Water	03/16/19 16:05	03/19/19 09:15

- 1
- 2
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- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Client Sample ID: PZ-1

Date Collected: 03/16/19 13:15

Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			273639	03/22/19 19:26	CMR	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			434330	03/22/19 00:31	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			434486	03/22/19 15:24	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	434522	03/25/19 11:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1			434760	03/26/19 15:29	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	273603	03/21/19 15:39	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			273610	03/16/19 13:15	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Date Collected: 03/16/19 16:05

Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			273639	03/22/19 20:13	CMR	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			434330	03/22/19 00:35	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	434144	03/21/19 12:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			434486	03/22/19 15:27	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	434522	03/25/19 11:37	JAP	TAL PEN
Total/NA	Analysis	7470A		1			434760	03/26/19 15:36	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	273609	03/21/19 18:00	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			273610	03/16/19 16:05	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

CMR = Carl Reagle

FDS = Sampler Field

TAM = Tessa Mastalski

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Client Sample ID: PZ-1
Date Collected: 03/16/19 13:15
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		1.0	0.71	mg/L			03/22/19 19:26	1
Fluoride	0.047	J F1	0.20	0.026	mg/L			03/22/19 19:26	1
Sulfate	3.6		1.0	0.38	mg/L			03/22/19 19:26	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00062	J	0.0013	0.00046	mg/L		03/21/19 12:30	03/22/19 00:31	5
Barium	0.090		0.0025	0.00049	mg/L		03/21/19 12:30	03/22/19 00:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:31	5
Calcium	17000		250	130	ug/L		03/21/19 12:30	03/22/19 00:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/21/19 12:30	03/22/19 00:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/19 12:30	03/22/19 00:31	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		03/21/19 12:30	03/22/19 00:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/21/19 12:30	03/22/19 00:31	5
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/19 12:30	03/22/19 00:31	5
Selenium	<0.00071		0.0013	0.00071	mg/L		03/21/19 12:30	03/22/19 00:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/19 12:30	03/22/19 00:31	5
Lithium	0.0088		0.0050	0.0011	mg/L		03/21/19 12:30	03/22/19 00:31	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.028	J	0.050	0.021	mg/L		03/21/19 12:30	03/22/19 15:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/25/19 11:37	03/26/19 15:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		10	10	mg/L			03/21/19 15:39	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.97				SU			03/16/19 13:15	1

Client Sample ID: PZ-2
Date Collected: 03/16/19 16:05
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.71	mg/L			03/22/19 20:13	1
Fluoride	0.041	J F1	0.20	0.026	mg/L			03/22/19 20:13	1
Sulfate	0.88	J	1.0	0.38	mg/L			03/22/19 20:13	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00084	J	0.0013	0.00046	mg/L		03/21/19 12:30	03/22/19 00:35	5
Barium	0.069		0.0025	0.00049	mg/L		03/21/19 12:30	03/22/19 00:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:35	5

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

Client Sample ID: PZ-2

Lab Sample ID: 180-87808-4

Date Collected: 03/16/19 16:05

Matrix: Water

Date Received: 03/19/19 09:15

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	13000		250	130	ug/L		03/21/19 12:30	03/22/19 00:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/22/19 00:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/21/19 12:30	03/22/19 00:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/19 12:30	03/22/19 00:35	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		03/21/19 12:30	03/22/19 00:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/21/19 12:30	03/22/19 00:35	5
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/19 12:30	03/22/19 00:35	5
Selenium	<0.00071		0.0013	0.00071	mg/L		03/21/19 12:30	03/22/19 00:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/19 12:30	03/22/19 00:35	5
Lithium	0.012		0.0050	0.0011	mg/L		03/21/19 12:30	03/22/19 00:35	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.035	J	0.050	0.021	mg/L		03/21/19 12:30	03/22/19 15:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000097	J	0.00020	0.000070	mg/L		03/25/19 11:37	03/26/19 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		10	10	mg/L			03/21/19 18:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.44				SU			03/16/19 16:05	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-273639/6
Matrix: Water
Analysis Batch: 273639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			03/22/19 14:24	1
Fluoride	<0.026		0.20	0.026	mg/L			03/22/19 14:24	1
Sulfate	<0.38		1.0	0.38	mg/L			03/22/19 14:24	1

Lab Sample ID: LCS 180-273639/5
Matrix: Water
Analysis Batch: 273639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.7		mg/L		107	90 - 110
Fluoride	1.25	1.27		mg/L		102	90 - 110
Sulfate	25.0	26.5		mg/L		106	90 - 110

Lab Sample ID: 180-87808-3 MS
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.3		25.0	34.5		mg/L		101	80 - 120
Fluoride	0.047	J F1	1.25	1.86	F1	mg/L		145	80 - 120
Sulfate	3.6		25.0	29.1		mg/L		102	80 - 120

Lab Sample ID: 180-87808-3 MSD
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.3		25.0	34.1		mg/L		99	80 - 120	1	20
Fluoride	0.047	J F1	1.25	1.84	F1	mg/L		144	80 - 120	1	20
Sulfate	3.6		25.0	28.7		mg/L		101	80 - 120	1	20

Lab Sample ID: 180-87808-4 MS
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		25.0	40.4		mg/L		104	80 - 120
Fluoride	0.041	J F1	1.25	1.86	F1	mg/L		145	80 - 120
Sulfate	0.88	J	25.0	26.5		mg/L		102	80 - 120

Lab Sample ID: 180-87808-4 MSD
Matrix: Water
Analysis Batch: 273639

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	14		25.0	39.4		mg/L		100	80 - 120	2	20
Fluoride	0.041	J F1	1.25	1.78	F1	mg/L		139	80 - 120	4	20
Sulfate	0.88	J	25.0	26.0		mg/L		101	80 - 120	2	20

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-273746/6
Matrix: Water
Analysis Batch: 273746

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			03/23/19 10:27	1
Fluoride	<0.026		0.20	0.026	mg/L			03/23/19 10:27	1
Sulfate	<0.38		1.0	0.38	mg/L			03/23/19 10:27	1

Lab Sample ID: LCS 180-273746/5
Matrix: Water
Analysis Batch: 273746

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Fluoride	1.25	1.28		mg/L		102	90 - 110
Sulfate	25.0	26.3		mg/L		105	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-434144/1-A ^5
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/21/19 12:30	03/21/19 22:43	5
Boron	<0.021		0.050	0.021	mg/L		03/21/19 12:30	03/21/19 22:43	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/21/19 12:30	03/21/19 22:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/21/19 22:43	5
Calcium	<130		250	130	ug/L		03/21/19 12:30	03/21/19 22:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/19 12:30	03/21/19 22:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/21/19 12:30	03/21/19 22:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/19 12:30	03/21/19 22:43	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		03/21/19 12:30	03/21/19 22:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/21/19 12:30	03/21/19 22:43	5
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/19 12:30	03/21/19 22:43	5
Selenium	<0.00071		0.0013	0.00071	mg/L		03/21/19 12:30	03/21/19 22:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/19 12:30	03/21/19 22:43	5
Lithium	<0.0011		0.0050	0.0011	mg/L		03/21/19 12:30	03/21/19 22:43	5

Lab Sample ID: LCS 400-434144/2-A
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0495		mg/L		99	80 - 120
Boron	0.100	0.106		mg/L		106	80 - 120
Barium	0.0500	0.0488		mg/L		98	80 - 120
Beryllium	0.0500	0.0486		mg/L		97	80 - 120
Calcium	5000	4720		ug/L		94	80 - 120
Cadmium	0.0500	0.0482		mg/L		96	80 - 120
Cobalt	0.0500	0.0502		mg/L		100	80 - 120
Chromium	0.0500	0.0483		mg/L		97	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-434144/2-A
Matrix: Water
Analysis Batch: 434330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 434144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0490		mg/L		98	80 - 120
Antimony	0.0500	0.0474		mg/L		95	80 - 120
Selenium	0.0500	0.0466		mg/L		93	80 - 120
Thallium	0.0100	0.00971		mg/L		97	80 - 120
Lithium	0.0500	0.0517		mg/L		103	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-273603/2
Matrix: Water
Analysis Batch: 273603

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/21/19 15:39	1

Lab Sample ID: LCS 180-273603/1
Matrix: Water
Analysis Batch: 273603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	304	262		mg/L		86	80 - 120

Lab Sample ID: MB 180-273609/2
Matrix: Water
Analysis Batch: 273609

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/21/19 18:00	1

Lab Sample ID: LCS 180-273609/1
Matrix: Water
Analysis Batch: 273609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	304	290		mg/L		95	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

TestAmerica Job ID: 180-87808-1
SDG: 1

HPLC/IC

Analysis Batch: 273639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total/NA	Water	300.0	
180-87808-4	PZ-2	Total/NA	Water	300.0	

Metals

Prep Batch: 434144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total Recoverable	Water	3005A	
180-87808-3 - RA	PZ-1	Total Recoverable	Water	3005A	
180-87808-4 - RA	PZ-2	Total Recoverable	Water	3005A	
180-87808-4	PZ-2	Total Recoverable	Water	3005A	

Analysis Batch: 434330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total Recoverable	Water	6020	434144
180-87808-4	PZ-2	Total Recoverable	Water	6020	434144

Analysis Batch: 434486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3 - RA	PZ-1	Total Recoverable	Water	6020	434144
180-87808-4 - RA	PZ-2	Total Recoverable	Water	6020	434144

Prep Batch: 434522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total/NA	Water	7470A	
180-87808-4	PZ-2	Total/NA	Water	7470A	

Analysis Batch: 434760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total/NA	Water	7470A	434522
180-87808-4	PZ-2	Total/NA	Water	7470A	434522

General Chemistry

Analysis Batch: 273603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total/NA	Water	SM 2540C	

Analysis Batch: 273609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-4	PZ-2	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 273610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-3	PZ-1	Total/NA	Water	Field Sampling	
180-87808-4	PZ-2	Total/NA	Water	Field Sampling	

TestAmerica Pittsburgh

101 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab P/M: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 180-50333-10589.1 Page: Page 1 of 1	
Due Date Requested: TAT Requested (days): PO #: SCS-10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested			
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Total Number of Containers:			
Sample Identification AP MW-1R AP NW-1 PZ-1 PZ-2 Dup-01 EB-01 EB-01		Sample Date 3/16/19 	Sample Time 1155 1016 1315 1605 1016 1505 1505	Sample Type (C=Comp, G=grab) G 	Matrix (W=water, S=solid, O=volatile, ST=Steam, AA=Air) Water Water Water Water Water Water
Flight Filtered Sample (Yes or No)		Flight Filtered Sample (Yes or No)		Preservation Code:	
6020, 7470A		2540C, Calcd, 300, ORGFM, 28D		D N	
Barcode: 180-87808 Chain of Custody		Special Instructions/QC Requirements:			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:			
Relinquished by: <i>John Brandy</i> Relinquished by:		Date/Time: 3/17/19 1630 Date/Time:		Date/Time: 3-19-19 Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Client Information
 Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: [blank]
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site: [blank]

Sampler: *Travis Bradstock*
 Lab PM: Bortot, Veronica
 E-Mail: veronica_bortot@testamericainc.com

Carrier Tracking No(s): [blank]

COC No: 180-50333-10589.1
 Page: Page 1 of 1
 Job #:

Due Date Requested: [blank]
 TAT Requested (days): [blank]
 PO #: SCS10382606
 WO #: [blank]
 Project #: 18020186
 SSOW#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Spec
APNW-1R	2/16/19	1155	G	Water	
APNW-1		1016		Water	
PZ-1		1315		Water	
PZ-2		1605		Water	
Dup-01		1016		Water	
FB-01		1505		Water	
EB-01		1505		Water	

6020, 7470A
 2540C_Calcd, 300_ORGFM_28D

Barcode: 180-87808 Chain of Custody

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Z - other (specify)

Analysis Requested

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: [blank] Date: [blank]
 Relinquished by: *Jesse Brubaker* Date/Time: 3/17/19 1630
 Relinquished by: [blank] Date/Time: [blank]
 Relinquished by: [blank] Date/Time: [blank]

Method of Shipment: [blank]
 Received by: *Phillie Watson* Date/Time: 3-19-19
 Received by: [blank] Date/Time: 3/15
 Received by: [blank] Date/Time: [blank]

Company: RWH Company
 Company: [blank]
 Company: [blank]

Custody Seals Intact: Yes No
 Custody Seal No.: [blank]
 Cooler Temperature(s) °C and Other Remarks: [blank]

ORIGIN ID: PNSA (850) 994-7469
TREVOR BADDOCK
RDH ENVIROMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWT: 65.00 LB
CAD: 006994796/SSFE1922
DIMS: 24x14x15 IN

PACE, FL 32571
UNITED STATES US

BILL CREDIT CARD

TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

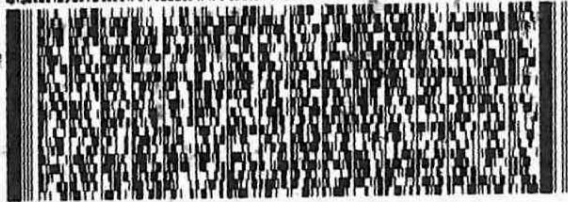
PITTSBURGH PA 15238

(412) 969-7068

REF:

INV:

DEPT:



FedEx
Express



2 of 2

MPS# 7861 0239 4377

Mstr# 7861 0239 4366

0201

TUE - 19 MAR 10:30A
PRIORITY OVERNIGHT

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

11 °C
10

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18



180-87808 Waybill

Do Not Lift Using This Tag

Recipient's Name <i>Please print.</i>	Phone Number
Test America	(412) 963-7058
Company	Dept./Floor/Suite/Room
Test America	
Street Address <i>We cannot deliver to P.O. boxes or P.O. ZIP codes.</i>	
301 ALPHA DR	

ORIGIN ID: PNSA (850) 994-7469
TREVOR BADDOCK
RDH ENVIRONMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWGT: 59.80 LB
CAD: 006994796/SSFE1922
DIMS: 26x13x14 IN

PACE, FL 32571
UNITED STATES US

BILL CREDIT CARD

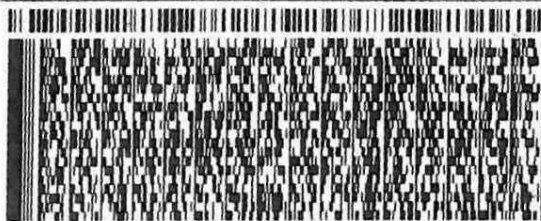
TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

PITTSBURGH PA 15238

(412) 963-7058
PHU:
PD:

REF:

DEPT:



FedEx
Express



1 of 2

TRK# 7861 0239 4366

MASTER

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

1.8 °C
10

CF Initials

TB

PT-WI-SR-001 effective 11/8/18





Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email: Project Name: CCR - Plant Watson Site: 18020186		Sampler: Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com State of Origin: Georgia Carrier Tracking No(s): 180-357687.1 Page: Page 1 of 1 Job #: 180-87808-1					
Due Date Requested: 3/26/2019 TAT Requested (days): PO #: WO #: Project #: 18020186 SSOW #:		Accreditations Required (See note): M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Other:					
Sample Identification - Client ID (Lab ID)		Analysis Requested					
Sample Date		Field Filtered Sample (Yes or No)					
Sample Time		Perform MS/MSD (Yes or No)					
Sample Type (C=Comp, G=grab)		SbAsBa,BeCd,Cr,Co,Cu,Pb,Mn,Se,Ag,Tl,V					
Sample Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)		Total Number of containers					
Preservation Code:		Special Instructions/Note:					
APMW-1R (180-87808-1)	3/16/19	11:55 Eastern	Water	X	1		
APMW-1 (180-87808-2)	3/16/19	10:16 Eastern	Water	X	1		
PZ-1 (180-87808-3)	3/16/19	13:15 Eastern	Water	X	1		
PZ-2 (180-87808-4)	3/16/19	16:05 Eastern	Water	X	1		
DUP-01 (180-87808-5)	3/16/19	10:16 Eastern	Water	X	1		
FB-01 (180-87808-6)	3/16/19	15:05 Eastern	Water	X	1		
EB-01 (180-87808-7)	3/16/19	15:05 Eastern	Water	X	1		

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 3/16/19 1700 Company: DAPIB
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Received by: _____ Date/Time: 3-20-19 9:01 Company: _____
 Received by: _____ Date/Time: 3-20-19 9:01 Company: _____
 Received by: _____ Date/Time: 3-20-19 9:01 Company: _____
 Cooler Temperature(s) °C and Other Remarks: 0.28 RB

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Method of Shipment: _____
 Date: _____
 Time: _____

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-1

Login Number: 87808

List Number: 1

Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-1

Login Number: 87808
List Number: 2
Creator: Brown, Nathan

List Source: TestAmerica Pensacola
List Creation: 03/20/19 04:34 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-87808-2
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:
7/31/2019 4:32:29 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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results through
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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Job ID: 180-87808-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-87808-2

Comments

No additional comments.

Receipt

The samples were received on 3/19/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.0° C and 1.1° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-422776

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1R (180-87808-1), APMW-1 (180-87808-2), PZ-1 (180-87808-3), PZ-2 (180-87808-4), DUP-01 (180-87808-5), FB-01 (180-87808-6), EB-01 (180-87808-7), (LCS 160-422776/1-A), (MB 160-422776/24-A), (240-109577-H-6-A), (240-109577-A-6-A MS) and (240-109577-A-6-B MSD)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-422779

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1R (180-87808-1), APMW-1 (180-87808-2), PZ-1 (180-87808-3), PZ-2 (180-87808-4), DUP-01 (180-87808-5), FB-01 (180-87808-6), EB-01 (180-87808-7), (LCS 160-422779/1-A), (MB 160-422779/24-A), (240-109577-H-6-B), (240-109577-A-6-C MS) and (240-109577-A-6-D MSD)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-422779:

The following samples had matrices that deviated from the typical water matrix: APMW-1R (180-87808-1), APMW-1 (180-87808-2) and DUP-01 (180-87808-5). Samples 160-33399-7, 160-33399-9, 180-87808-1, 180-87808-2, 180-87808-5, and 240-109577-1 had light yellow discoloration. Sample 240-109577-2 was prepared at a reduced aliquot due to dark yellow discoloration and heavy sediment.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-422776:

The following samples had matrices that deviated from the typical water matrix: APMW-1R (180-87808-1), APMW-1 (180-87808-2) and DUP-01 (180-87808-5). Samples 160-33399-7, 160-33399-9, 180-87808-1, 180-87808-2, 180-87808-5, and 240-109577-1 had light yellow discoloration. Sample 240-109577-2 was prepared at a reduced aliquot due to dark yellow discoloration and heavy sediment.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Hawaii	State Program	9	NA	06-30-19 *
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Michigan	State Program	5	9005	06-30-19 *
Missouri	State Program	7	780	06-30-20
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-20
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-20
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-87808-1	APMW-1R	Water	03/16/19 11:55	03/19/19 09:15	
180-87808-3	PZ-1	Water	03/16/19 13:15	03/19/19 09:15	
180-87808-4	PZ-2	Water	03/16/19 16:05	03/19/19 09:15	
180-87808-5	DUP-01	Water	03/16/19 10:16	03/19/19 09:15	
180-87808-6	FB-01	Water	03/16/19 15:05	03/19/19 09:15	
180-87808-7	EB-01	Water	03/16/19 15:05	03/19/19 09:15	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-87808-1

Date Collected: 03/16/19 11:55

Matrix: Water

Date Received: 03/19/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.08 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	426002	04/28/19 17:55	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			1000.08 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:09	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-1

Lab Sample ID: 180-87808-3

Date Collected: 03/16/19 13:15

Matrix: Water

Date Received: 03/19/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.80 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1			425987	04/28/19 18:04	BLH	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			999.80 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:10	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-87808-4

Date Collected: 03/16/19 16:05

Matrix: Water

Date Received: 03/19/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.11 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1			425987	04/28/19 18:04	BLH	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			999.11 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:10	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-87808-5

Date Collected: 03/16/19 10:16

Matrix: Water

Date Received: 03/19/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.82 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1			425987	04/28/19 18:04	BLH	TAL SL
Instrument ID: GFPCPROTEAN										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: DUP-01
Date Collected: 03/16/19 10:16
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.82 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:10	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: FB-01
Date Collected: 03/16/19 15:05
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.30 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1			425987	04/28/19 18:04	BLH	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.30 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:10	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: EB-01
Date Collected: 03/16/19 15:05
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.37 mL	1.0 g	422776	04/04/19 17:19	CLP	TAL SL
Total/NA	Analysis	9315		1			425987	04/28/19 18:04	BLH	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.37 mL	1.0 g	422779	04/04/19 17:54	CLP	TAL SL
Total/NA	Analysis	9320		1			424263	04/17/19 09:10	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			426118	04/30/19 10:09	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

CLP = Cassandra Park

Batch Type: Analysis

BLH = Brandi Huesmann

CDR = Conrad Reuscher

SMP = Siobhan Perry

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-87808-1

Date Collected: 03/16/19 11:55

Matrix: Water

Date Received: 03/19/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.92		0.274	0.380	1.00	0.0757	pCi/L	04/04/19 17:19	04/28/19 17:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					04/04/19 17:19	04/28/19 17:55	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.95		0.396	0.480	1.00	0.353	pCi/L	04/04/19 17:54	04/17/19 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					04/04/19 17:54	04/17/19 09:09	1
Y Carrier	88.6		40 - 110					04/04/19 17:54	04/17/19 09:09	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.87		0.482	0.612	5.00	0.353	pCi/L		04/30/19 10:09	1

Client Sample ID: PZ-1

Lab Sample ID: 180-87808-3

Date Collected: 03/16/19 13:15

Matrix: Water

Date Received: 03/19/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236		0.0974	0.0997	1.00	0.105	pCi/L	04/04/19 17:19	04/28/19 18:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					04/04/19 17:19	04/28/19 18:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.185	U	0.245	0.245	1.00	0.408	pCi/L	04/04/19 17:54	04/17/19 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					04/04/19 17:54	04/17/19 09:10	1
Y Carrier	83.0		40 - 110					04/04/19 17:54	04/17/19 09:10	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-87808-3

Date Collected: 03/16/19 13:15

Matrix: Water

Date Received: 03/19/19 09:15

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.421		0.264	0.265	5.00	0.408	pCi/L		04/30/19 10:09	1

Client Sample ID: PZ-2

Lab Sample ID: 180-87808-4

Date Collected: 03/16/19 16:05

Matrix: Water

Date Received: 03/19/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.154		0.0873	0.0884	1.00	0.111	pCi/L	04/04/19 17:19	04/28/19 18:04	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	92.3		40 - 110					04/04/19 17:19	04/28/19 18:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.611		0.315	0.320	1.00	0.473	pCi/L	04/04/19 17:54	04/17/19 09:10	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	92.3		40 - 110					04/04/19 17:54	04/17/19 09:10	1
<i>Y Carrier</i>	86.0		40 - 110					04/04/19 17:54	04/17/19 09:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.765		0.327	0.332	5.00	0.473	pCi/L		04/30/19 10:09	1

Client Sample ID: DUP-01

Lab Sample ID: 180-87808-5

Date Collected: 03/16/19 10:16

Matrix: Water

Date Received: 03/19/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.91		0.300	0.398	1.00	0.0976	pCi/L	04/04/19 17:19	04/28/19 18:04	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	97.6		40 - 110					04/04/19 17:19	04/28/19 18:04	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: DUP-01
Date Collected: 03/16/19 10:16
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-5
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.61		0.458	0.566	1.00	0.428	pCi/L	04/04/19 17:54	04/17/19 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					04/04/19 17:54	04/17/19 09:10	1
Y Carrier	86.4		40 - 110					04/04/19 17:54	04/17/19 09:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.52		0.548	0.692	5.00	0.428	pCi/L		04/30/19 10:09	1

Client Sample ID: FB-01
Date Collected: 03/16/19 15:05
Date Received: 03/19/19 09:15

Lab Sample ID: 180-87808-6
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00153	U	0.0556	0.0556	1.00	0.114	pCi/L	04/04/19 17:19	04/28/19 18:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					04/04/19 17:19	04/28/19 18:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.151	U	0.284	0.284	1.00	0.481	pCi/L	04/04/19 17:54	04/17/19 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					04/04/19 17:54	04/17/19 09:10	1
Y Carrier	83.7		40 - 110					04/04/19 17:54	04/17/19 09:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.153	U	0.289	0.289	5.00	0.481	pCi/L		04/30/19 10:09	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Client Sample ID: EB-01

Lab Sample ID: 180-87808-7

Date Collected: 03/16/19 15:05

Matrix: Water

Date Received: 03/19/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0310	U	0.0550	0.0550	1.00	0.0976	pCi/L	04/04/19 17:19	04/28/19 18:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					04/04/19 17:19	04/28/19 18:04	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0322	U	0.213	0.213	1.00	0.378	pCi/L	04/04/19 17:54	04/17/19 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					04/04/19 17:54	04/17/19 09:10	1
Y Carrier	84.1		40 - 110					04/04/19 17:54	04/17/19 09:10	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0632	U	0.220	0.220	5.00	0.378	pCi/L		04/30/19 10:09	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-422776/24-A
Matrix: Water
Analysis Batch: 425986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422776

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.002617	U	0.0456	0.0456	1.00	0.0958	pCi/L	04/04/19 17:19	04/28/19 19:45	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/04/19 17:19	04/28/19 19:45	1
	97.3									

Lab Sample ID: LCS 160-422776/1-A
Matrix: Water
Analysis Batch: 425986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422776

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	%Yield	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-226			11.4	9.455		0.994	1.00	0.0815	pCi/L	83	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	90.9										

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-422779/24-A
Matrix: Water
Analysis Batch: 424310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422779

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2493	U	0.240	0.241	1.00	0.389	pCi/L	04/04/19 17:54	04/17/19 09:18	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/04/19 17:54	04/17/19 09:18	1
Y Carrier	86.0		40 - 110					04/04/19 17:54	04/17/19 09:18	1

Lab Sample ID: LCS 160-422779/1-A
Matrix: Water
Analysis Batch: 424263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422779

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	%Yield	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-228			9.29	10.04		1.17	1.00	0.405	pCi/L	108	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
Y Carrier	84.5		40 - 110								

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-87808-2
SDG: 1

Rad

Prep Batch: 422776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	PrecSep-21	
180-87808-3	PZ-1	Total/NA	Water	PrecSep-21	
180-87808-4	PZ-2	Total/NA	Water	PrecSep-21	
180-87808-5	DUP-01	Total/NA	Water	PrecSep-21	
180-87808-6	FB-01	Total/NA	Water	PrecSep-21	
180-87808-7	EB-01	Total/NA	Water	PrecSep-21	

Prep Batch: 422779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87808-1	APMW-1R	Total/NA	Water	PrecSep_0	
180-87808-3	PZ-1	Total/NA	Water	PrecSep_0	
180-87808-4	PZ-2	Total/NA	Water	PrecSep_0	
180-87808-5	DUP-01	Total/NA	Water	PrecSep_0	
180-87808-6	FB-01	Total/NA	Water	PrecSep_0	
180-87808-7	EB-01	Total/NA	Water	PrecSep_0	

Client Information Client Contact: Rick Hagendorfer Company: RDH Environmental Services Inc Address: 5720 Dove Drive City: Pace State, Zip: FL, 32571 Phone: PO #: SCS10382606 Email: rickhagendorfer@gmail.com Project #: 18020186 CCR - Plant Watson Site:		Lab P.M.: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone:		Carrier Tracking No(s): COC No: 180-50378-10601.1 Page: Page 1 of 1 Job #:					
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SOW#:		Analysis Requested							
Sample Identification APNW-1B APNW-1 P2-1 P2-2 DNF-01 PB-01 EB-01		Sample Date 3/16/19	Sample Time 1155 1016 1315 1605 1916 1505 1505	Sample Type (C=comp, G=grab) b	Matrix (W=water, S=solid, O=oil, T=tissue, A=air) Water Water Water Water Water	Field Filtered Sample (Yes or No) X X X X X X	Total Number of Containers X X X X X X	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecathylate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	Special Instructions/Note: 9315, Ra226, 9320, Ra228, Ra226Ra228, GFPC
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Empty Kit Relinquished by: YMW Bmw Relinquished by: YMW Bmw Relinquished by:		Method of Shipment:							
Date/Time: 3/17/19 1619 Date/Time:		Received by: RDH Date/Time: 3-19-19 Received by: 9/15 Date/Time: 9/15 Received by:							
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:							



101 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab P/M: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 180-50333-10589.1 Page: Page 1 of 1				
Due Date Requested: TAT Requested (days): PO #: SCS-10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested						
Sample Identification APNW-1R APNW-1 PZ-1 PZ-2 Dup-01 EB-01 EB-01		Sample Date 3/16/19	Sample Time 1155 1016 1315 1605 1016 1505 1505	Sample Type (C=Comp, G=grab) G 	Matrix (W=water, S=solid, O=water, ST=Steam, AA=Air) Water Water Water Water Water	Flight Filtered Sample (Yes or No) 6020, 7470A 2540C, Calcd, 300, ORGFM, 28D	Total Number of Containers X X X X X X X	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Method of Shipment:				
Relinquished by: <i>Joan Brandy</i>		Date/Time: 3/17/19 1630		Received by: <i>Phillie Watson</i>				
Relinquished by:		Date/Time:		Received by:				
Relinquished by:		Date/Time:		Received by:				
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:				

Client Information
 Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: [blank]
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site: [blank]

Sampler: *Travis Bradstock*
 Lab PM: Bortot, Veronica
 E-Mail: veronica_bortot@testamericainc.com

Carrier Tracking No(s): [blank]

COC No: 180-50333-10589.1
 Page: Page 1 of 1
 Job #:

Due Date Requested: [blank]
 TAT Requested (days): [blank]
 PO #: SCS10382606
 WO #: [blank]
 Project #: 18020186
 SSOW#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Spec
APNW-1R	2/16/19	1155	G	Water	
APNW-1		1016		Water	
PZ-1		1315		Water	
PZ-2		1605		Water	
Dup-01		1016		Water	
FB-01		1505		Water	
EB-01		1505		Water	

6020, 7470A
 2540C_Calcd, 300_ORGFM_28D

Barcode: 180-87808 Chain of Custody

Analysis Requested: [blank]

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other: [blank]

M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Z - other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: [blank]

Empty Kit Relinquished by: [blank] Date: [blank]
 Relinquished by: *Jesse Brubaker* Date/Time: 3/17/19 1630
 Relinquished by: [blank] Date/Time: [blank]
 Relinquished by: [blank] Date/Time: [blank]

Method of Shipment: [blank]
 Received by: *Phillie Watson* Date/Time: 3-19-19
 Received by: [blank] Date/Time: 3/15
 Received by: [blank] Date/Time: [blank]

Company: RWH Company
 Company: [blank]
 Company: [blank]

Custody Seals Intact: Yes No Δ No

Cooler Temperature(s) °C and Other Remarks: [blank]



Client Information		Company: RDH Environmental Services Inc		Address: 5720 Dove Drive		City: Pace		State, Zip: FL, 32571		Phone:		Email: rickhagendorfer@gmail.com		Project Name: CCR - Plant Watson		Site:				
Sampler: <i>Jover Braddock</i>		Lab PM: Bortot, Veronica		E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s):		COC No: 180-50378-10601.1		Page: Page 1 of 1		Job #:								
Analysis Requested																				
Due Date Requested:																				
TAT Requested (days):																				
PO #: SCS10382606																				
WC #:																				
Project #: 18020186																				
SSOW#:																				
Sample Identification																				
Sample ID			Sample Date			Sample Time			Sample Type (C=Comp, G=grab)			Matrix (Weather, Snow/Ice, Other)			Field Filtered Sample (Yes or No)			9315 Ra226, 9320 Ra228, Ra226Ra228_GFP		
APMW-1R			3/17/19			1150			b			Water			X			D		
APMW-1						1016						Water			X					
P2-1						1315						Water			X					
P2-2						1605						Water			X					
Dup-01						1016						Water			X					
PB-01						1505						Water			X					
EB-01						1505						Water			X					
Possible Hazard Identification																				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological																				
Deliverable Requested: I, II, III, IV, Other (specify)																				
Empty Kit Relinquished by:																				
Relinquished by: <i>YMW Bmw</i> Date: 3/17/19 Time: 1610																				
Relinquished by: <i>YMW Bmw</i> Date: 3/17/19 Time: 1610																				
Relinquished by: <i>YMW Bmw</i> Date: 3/17/19 Time: 1610																				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No																				
Custody Seal No.:																				
Special Instructions/QC Requirements:																				
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																				
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months																				
Method of Shipment:																				
Received by: <i>YMW Bmw</i> Date/Time: 3-19-19 Company: <i>TAP</i>																				
Received by: <i>YMW Bmw</i> Date/Time: 9/5 Company: <i>TAP</i>																				
Received by: <i>YMW Bmw</i> Date/Time: 9/5 Company: <i>TAP</i>																				
Cooler Temperature(s) °C and Other Remarks:																				



ORIGIN ID:PNSA (850) 994-7469
TREVOR BADDOCK
RDH ENVIROMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWGT: 65.00 LB
CAD: 006994796/SSFE1922
DIMS: 24x14x15 IN

PACE, FL 32571
UNITED STATES US

BILL CREDIT CARD

TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

PITTSBURGH PA 15238

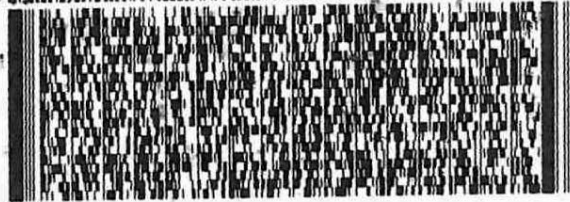
(412) 969-7068

REF:

INV:

DEPT:

PO:



FedEx
Express



1586-2280
565-114610/2300
8/19 00119

2 of 2

MPS# 7861 0239 4377

Mstr# 7861 0239 4366

0201

TUE - 19 MAR 10:30A
PRIORITY OVERNIGHT

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

11 °C
10

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18



180-87808 Waybill

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Recipient's Name <i>Please print.</i>	Phone Number
Test America	(412) 963-7058
Company	Dept./Floor/Suite/Room
Test America	
Street Address <i>We cannot deliver to P.O. boxes or P.O. ZIP codes.</i>	
301 ALPHA DR	

ORIGIN ID:PN5A (850) 994-7469
TREVOR BADDOCK
RDH ENVIRONMENTAL
5720 DOVE DR

SHIP DATE: 18MAR19
ACTWGT: 59.80 LB
CAD: 006994796/SSFE1922
DIMS: 26x13x14 IN

PACE, FL 32571
UNITED STATES US

BILL CREDIT CARD

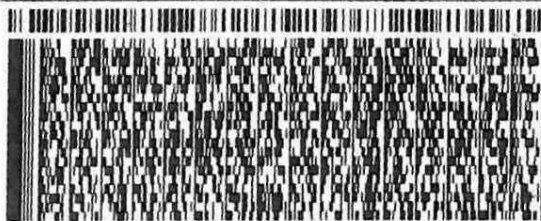
TO TEST AMERICA PITTSBURGH
TEST AMERICA PITTSBURGH
301 ALPHA DR RIDC PARK

PITTSBURGH PA 15238

(412) 963-7058
PHU:
PD:

REF:

DEPT:



FedEx
Express



1 of 2
TRK# 7861 0239 4366
0201

TUE - 19 MAR 10:30A
PRIORITY OVERNIGHT

MASTER

XH AGCA

15238

PA-US PIT

Uncorrected temp
Thermometer ID

1.8
10 °C

CF Initials

TB

PT-WI-SR-001 effective 11/8/18



301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: **Samper:** _____
 Shipping/Receiving: **Phone:** _____
 Company: **TestAmerica Laboratories, Inc.** **Lab PM:** Borot, Veronica
 Address: **13715 Rider Trail North,** **Due Date Requested:** 4/17/2019
Earth City: _____ **TAT Requested (days):** _____
State Zip: MO, 63045
Phone: 314-298-8566 (Tel) 314-298-8757 (Fax) **PO #:** _____
Email: _____ **WO #:** _____
Project Name: CCR - Plant Watson **Project #:** 18020186
Site: _____ **SSOW#:** _____

Analysis Requested

Carrier Tracking No(s)	State of Origin	Job #	COC No
	Georgia	180-87808-2	180-357800-1
		Page 1 of 1	

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
APMW-1R (180-87808-1)	3/16/19	11:55		Water			9315_Ra226/PrecSep_21 Standard Target List	1	
APMW-1 (180-87808-2)	3/16/19	10:16		Water			9320_Ra228/PrecSep_0 Standard Target List	1	
PZ-1 (180-87808-3)	3/16/19	13:15		Water			Ra226Ra228_GFPC	1	
PZ-2 (180-87808-4)	3/16/19	16:05		Water				1	
DUP-01 (180-87808-5)	3/16/19	10:16		Water				1	
FB-01 (180-87808-6)	3/16/19	15:05		Water				1	
EB-01 (180-87808-7)	3/16/19	15:05		Water				1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/method being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____

Relinquished by: _____ Date/Time: 3/20/19 12:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Received by: Michael Stearns
 Received by: _____
 Received by: _____

Method of Shipment: _____
 Date/Time: 3-21-19 09:15
 Date/Time: _____

Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-2

SDG Number: 1

Login Number: 87808

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-87808-2

SDG Number: 1

Login Number: 87808

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 03/21/19 11:59 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88200-2

Client Project/Site: CCR - Plant Watson APMW-1R

For:

Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:
4/18/2019 4:36:15 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Job ID: 180-88200-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88200-2

Comments

No additional comments.

Receipt

The samples were received on 3/28/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.8° C.

Receipt Exceptions

The following samples were submitted for analysis; however, they were not listed on the Chain-of-Custody (COC): FB-01 (180-88200-5), DUP-01 (180-88200-6) and EB-01 (180-88200-7) They were added to the login and given the analysis listed on the labels.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

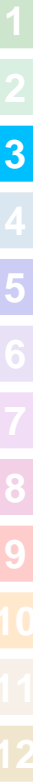
Method(s) 6020: The post digestion spike % recovery associated with batch 400-435940 was outside of control limits. The following sample is impacted: (180-88200-C-1-B PDS ^5).

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-435792 and analytical batch 400-435940 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88200-2	APMW-1R	Water	03/27/19 09:02	03/28/19 08:45

1

2

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Client Sample ID: APMW-1R

Lab Sample ID: 180-88200-2

Date Collected: 03/27/19 09:02

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			274458	04/01/19 09:13	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			274458	04/01/19 09:28	MJH	TAL PIT
Total/NA	Analysis	300.0		50			274458	04/01/19 09:28	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:38	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			436341	04/04/19 19:23	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 12:55	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			275566	03/27/19 09:02	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
 TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN
 Batch Type: Prep
 DRE = Daniel Etscheid
 JAP = Jane Parker
 Batch Type: Analysis
 DRE = Daniel Etscheid
 JAP = Jane Parker
 Lab: TAL PIT
 Batch Type: Analysis
 AVS = Abbey Smith
 FDS = Sampler Field
 MJH = Matthew Hartman

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

Client Sample ID: APMW-1R

Lab Sample ID: 180-88200-2

Date Collected: 03/27/19 09:02

Matrix: Water

Date Received: 03/28/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			04/01/19 09:28	50
Fluoride	<0.13		1.0	0.13	mg/L			04/01/19 09:13	5
Sulfate	19		5.0	1.9	mg/L			04/01/19 09:13	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:38	5
Barium	1.1		0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:38	5
Cobalt	0.00044 J		0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:38	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:38	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:38	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:38	5
Lithium	0.014		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:38	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.2		0.50	0.21	mg/L		04/03/19 18:46	04/04/19 19:23	50
Calcium	140		2.5	1.3	mg/L		04/03/19 18:46	04/04/19 19:23	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2900		40	40	mg/L			03/30/19 13:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.59				SU			03/27/19 09:02	1

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson APMW-1R

Job ID: 180-88200-2

HPLC/IC

Analysis Batch: 274458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	300.0	
180-88200-2	APMW-1R	Total/NA	Water	300.0	

Metals

Prep Batch: 435577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	7470A	

Analysis Batch: 435757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	7470A	435577

Prep Batch: 435792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total Recoverable	Water	3005A	
180-88200-2 - DL	APMW-1R	Total Recoverable	Water	3005A	

Analysis Batch: 435940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total Recoverable	Water	6020	435792

Analysis Batch: 436341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2 - DL	APMW-1R	Total Recoverable	Water	6020	435792

General Chemistry

Analysis Batch: 274449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 275566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	Field Sampling	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL 35291 Phone: [blank] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: [blank]		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): [blank]		COC No: 180-50334-10589-1 Page: Page 1 of 3 Job #: [blank]	
Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382506 WO #: [blank] Project #: 18020186 SSOW#: [blank]		Analysis Requested Total Number of Containers: [blank]			
Sample Identification APMW-1		Sample Date: 3/27/19	Sample Time: 1000	Sample Type (C=Comp, G=grab): G	Matrix (W=water, S=solid, O=other): Water
Sample Filtered (Yes or No): [blank]		D: [blank] N: [blank] I: [blank] D: [blank]	X: [blank] Y: [blank]	6020, 7470A 2540C, Calcd, 300, ORGM, 28D 9315, Ra226, 9320, Ra228	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: [blank]
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For [blank] Months		Special Instructions/Note: 180-88200 Chain of Custody			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify) [blank]			
Empty Kit Relinquished by: [Signature]		Method of Shipment: [blank]			
Relinquished by: [Signature]		Date/Time: 3/27/19 1415		Company: RPM	
Relinquished by: [Signature]		Date/Time: [blank]		Company: [blank]	
Relinquished by: [Signature]		Date/Time: [blank]		Company: [blank]	
Custody Seals Intact: [blank]		Cooler Temperature(s) °C and Other Remarks: [blank]		Company: [blank]	



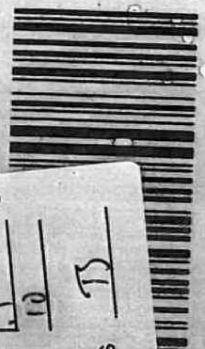
Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 180-50334-10589.1 Page: 2 of 3 Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382606 WO #:		Analysis Requested 9315_Ra226 9320_Ra228 2540C_Calcid, 300_ORGFM 28D 6020_7470A		Special Instructions/Note:	
Sample Identification APMW-2-16 APMW-1R		Field Filtered Sample (Yes or No) D N D X X X X X X X X X		Total Number of Containers	
Sample Date 3/27/19 0902		Sample Time G		Matrix Water Water Water Water Water	
Sample Type (C=Comp, G=grab) BT=Tissue, A=Air		Preservation Code:		Special Instructions/OC Requirements <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Other (specify)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested I, II, III, IV, Other (specify)		Empty Kit Relinquished by:	
Relinquished by: [Signature] Date/Time: 3/27/19 1415 Company: PDH		Received by: [Signature] Date/Time: 3-28-19 Company: APMA		Method of Shipment:	
Relinquished by: [Signature] Date/Time: Company:		Received by: [Signature] Date/Time: Company:		Cooler Temperature(s) °C and Other Remarks:	
Relinquished by: [Signature] Date/Time: Company:		Received by: [Signature] Date/Time: Company:		Custody Seal No. Δ Yes Δ No	

Client Information Client Contact: Philip Evans Phone: 850-336-0172 E-Mail: veronica.bortot@testamericainc.com Company: Southern Company		Lab #1: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com		SOC No: 180-50334-10589 1 Page: Page 1 of 3 Job #	
Address: PO BOX 2641 GSCB City: Birmingham State: AL 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382605 WO #: 18020186 Project #: 18020186 SSOV#:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - NaOH G - Acetic Acid H - Acetic Acid I - Ice J - DI Water K - EDTA L - EDTA Other:	
Sample Identification APMW-1 Barcode: 180-88200-B-1 Location: 11DD Bottle: Plastic 500ml - unreserved Sampled: 3/27/2019 10:00 AM 180-312-587		Sample Date: 3/27/19 Sample Time: 1000 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Soil, O=Other): Water		Analysis Requested Field Filtered Sample (Yes or No): X Field Number of Containers: X Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Barcode: 180-88200 Chain of Custody	
Relinquished by Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date: 3/27/19 1415 Date Time: 3/27/19 1415 Date Time: 8:15 Date Time:		Company: RPT Company: [Signature] Company: 815 Company:	
Custody Seals Intact Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:		Ver: 01/16/2019	



XH AGCA

15238
PA-US
PIT



Uncorrected temp _____ °C
 Thermometer ID 10
 CF U Initials TS

PT-WI-SR-001 effective 11/8/18

4930088 09/27 5851/4852/33AD



TO SAMPLE RECEIVING
 TEST AMERICA PITTSBURGH
 301 ALPHA DR.
 RETURNS
 PITTSBURGH PA 15238

ORIGIN ID: MULA (850) 336-0192
 NICK HAGENDORFER
 RCH
 5220 DOVE DRIVE
 PAGE, FL 32571
 UNITED STATES US

SHIP DATE: 19MARI19
 ACTWGT: 17.00 LB
 CAD: 859116/CAFE3211

1RCK:4651 0060 8861

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Part # 156297-435 RITZ 07/15
952/639/1159

SHIP DATE: 27MAR19
ACT WT: 46.70 LB
CAD: 008993789/SSFE2002
DIMS: 21x13x14 IN
BILL RECIPIENT

ORIGIN ID: BIXA (850) 336-0192
RDH ENVIRONMENTAL
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

TO
SAMPLE RECEIVING RETURN
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238

REF: (412) 969-7058
INVT. PO:



THU - 28 MAR 3:00P
STANDARD OVERNIGHT

TRK# 7862 8976 3053
0201

XH AGCA

15238
PA-US
PIT



Uncorrected temp 1.8 °C
Thermometer ID 10
CF 0 Initials B

PT-WJ-SR-001 effective 11/18/18

RUSH

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TestAmerica Pittsburgh
 301 Alpha Drive RIDC Park
 Pittsburgh, PA 15238
 Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record



TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking Not(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Bortol, Veronica	State of Origin: Georgia	180-358767.1
Company: TestAmerica Laboratories, Inc.		Due Date Requested: 4/26/2019	E-Mail: veronica.bortol@testamericainc.com	Accreditations Required (See note):	Page: Page 1 of 1
Address: 13715 Rider Trail North, Earth City, MO, 63045		TAT Requested (days):	Analysis Requested		Job #: 180-88200-2
State, Zip: MO, 63045		PO #:	Perform MS/MSD (Yes or No)		Preservation Codes:
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:	9315_Ra226/PrecSep_21 Standard Target List		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA
Email:		Project #:	9320_Ra228/PrecSep_0 Standard Target List		M - Hexane N - None O - AsVdO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
Project Name: CCR - Plant Watson		SSOW#:	Ra226Ra228_GFPC		Other:
Site:		Preservation Code:	Total Number of containers		Special Instructions/Note:
Sample Identification - Client ID (Lab ID)		Field Filtered Sample (Yes or No)			
APMW-1 (180-88200-1)	3/27/19	10:00 Eastern	Water	X	1
APMW-1R (180-88200-2)	3/27/19	09:02 Eastern	Water	X	1
PZ-1 (180-88200-3)	3/27/19	13:05 Eastern	Water	X	1
PZ-2 (180-88200-4)	3/27/19	11:40 Eastern	Water	X	1
FB-01 (180-88200-5)	3/27/19	09:55 Eastern	Water	X	1
DUP-01 (180-88200-6)	3/27/19	08:02 Eastern	Water	X	1
EB-01 (180-88200-7)	3/27/19	10:30 Eastern	Water	X	1

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit/Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Received by: *Michael Flynn* Date/Time: 4/16/19 09:20 Company: TR SL
 Received by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-2

Login Number: 88200

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-2

Login Number: 88200
List Number: 2
Creator: Brown, Nathan

List Source: Eurofins TestAmerica, Pensacola
List Creation: 04/02/19 01:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	12.5°C, 13.5°C, 13.2°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88200-3

Laboratory Sample Delivery Group: Ash

Client Project/Site: CCR - Plant Watson PZ-1 & PZ-2

For:

Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:
4/18/2019 4:31:06 PM

Veronica Bortot, Senior Project Manager
(412)963-2435

veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Job ID: 180-88200-3

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88200-3

Comments

No additional comments.

Receipt

The samples were received on 3/28/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.8° C.

Receipt Exceptions

The following samples were submitted for analysis; however, they were not listed on the Chain-of-Custody (COC): FB-01 (180-88200-5), DUP-01 (180-88200-6) and EB-01 (180-88200-7) They were added to the login and given the analysis listed on the labels.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The post digestion spike % recovery associated with batch 400-435940 was outside of control limits. The following sample is impacted: (180-88200-C-1-B PDS ^5).

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-435792 and analytical batch 400-435940 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
 SDG: Ash

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
 SDG: Ash

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88200-3	PZ-1	Water	03/27/19 13:05	03/28/19 08:45
180-88200-4	PZ-2	Water	03/27/19 11:40	03/28/19 08:45
180-88200-5	FB-01	Water	03/27/19 09:55	03/28/19 08:45
180-88200-6	DUP-01	Water	03/27/19 08:02	03/28/19 08:45
180-88200-7	EB-01	Water	03/27/19 10:30	03/28/19 08:45

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
 SDG: Ash

Client Sample ID: PZ-1

Lab Sample ID: 180-88200-3

Date Collected: 03/27/19 13:05

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			274458	04/01/19 10:14	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:42	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			436341	04/04/19 19:27	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 12:57	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			275566	03/27/19 13:05	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-88200-4

Date Collected: 03/27/19 11:40

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			274458	04/01/19 07:25	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:46	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			436341	04/04/19 19:31	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 12:59	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			275566	03/27/19 11:40	FDS	TAL PIT
Instrument ID: NOEQUIP										

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Client Sample ID: FB-01
Date Collected: 03/27/19 09:55
Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			274458	04/01/19 06:09	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:50	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 13:00	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01
Date Collected: 03/27/19 08:02
Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			274458	04/01/19 09:44	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			274458	04/01/19 09:59	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:54	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			436341	04/04/19 19:34	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 13:02	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: EB-01
Date Collected: 03/27/19 10:30
Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			274458	04/01/19 06:24	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			435940	04/04/19 13:58	DRE	TAL PEN
Instrument ID: ICPMS7700										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
 SDG: Ash

Client Sample ID: EB-01
Date Collected: 03/27/19 10:30
Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	435792	04/03/19 18:46	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			436341	04/04/19 19:39	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	435577	04/02/19 14:10	JAP	TAL PEN
Total/NA	Analysis	7470A		1			435757	04/03/19 13:04	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	274449	03/30/19 13:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
 TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN
 Batch Type: Prep
 DRE = Daniel Etscheid
 JAP = Jane Parker
 Batch Type: Analysis
 DRE = Daniel Etscheid
 JAP = Jane Parker
 Lab: TAL PIT
 Batch Type: Analysis
 AVS = Abbey Smith
 FDS = Sampler Field
 MJH = Matthew Hartman



Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Client Sample ID: PZ-1

Lab Sample ID: 180-88200-3

Date Collected: 03/27/19 13:05

Matrix: Water

Date Received: 03/28/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2		1.0	0.71	mg/L			04/01/19 10:14	1
Fluoride	<0.026		0.20	0.026	mg/L			04/01/19 10:14	1
Sulfate	0.81	J	1.0	0.38	mg/L			04/01/19 10:14	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:42	5
Barium	0.095		0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:42	5
Calcium	16		0.25	0.13	mg/L		04/03/19 18:46	04/04/19 13:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:42	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:42	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:42	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:42	5
Lithium	0.010		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:42	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.027	J	0.050	0.021	mg/L		04/03/19 18:46	04/04/19 19:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	63		10	10	mg/L			03/30/19 13:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.70				SU			03/27/19 13:05	1

Client Sample ID: PZ-2

Lab Sample ID: 180-88200-4

Date Collected: 03/27/19 11:40

Matrix: Water

Date Received: 03/28/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			04/01/19 07:25	1
Fluoride	0.49		0.20	0.026	mg/L			04/01/19 07:25	1
Sulfate	1.3		1.0	0.38	mg/L			04/01/19 07:25	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:46	5
Barium	0.079		0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:46	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Client Sample ID: PZ-2

Lab Sample ID: 180-88200-4

Date Collected: 03/27/19 11:40

Matrix: Water

Date Received: 03/28/19 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	15		0.25	0.13	mg/L		04/03/19 18:46	04/04/19 13:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:46	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:46	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:46	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:46	5
Lithium	0.012		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.033	J	0.050	0.021	mg/L		04/03/19 18:46	04/04/19 19:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		10	10	mg/L			03/30/19 13:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.38				SU			03/27/19 11:40	1

Client Sample ID: FB-01

Lab Sample ID: 180-88200-5

Date Collected: 03/27/19 09:55

Matrix: Water

Date Received: 03/28/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/01/19 06:09	1
Fluoride	<0.026		0.20	0.026	mg/L			04/01/19 06:09	1
Sulfate	0.55	J	1.0	0.38	mg/L			04/01/19 06:09	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:50	5
Boron	<0.021		0.050	0.021	mg/L		04/03/19 18:46	04/04/19 13:50	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:50	5
Calcium	<0.13		0.25	0.13	mg/L		04/03/19 18:46	04/04/19 13:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:50	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:50	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:50	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:50	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
 SDG: Ash

Client Sample ID: FB-01
 Date Collected: 03/27/19 09:55
 Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-5
 Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:50	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:50	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 13:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/30/19 13:52	1

Client Sample ID: DUP-01
 Date Collected: 03/27/19 08:02
 Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-6
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1800		50	36	mg/L			04/01/19 09:59	50
Fluoride	<0.13		1.0	0.13	mg/L			04/01/19 09:44	5
Sulfate	18		5.0	1.9	mg/L			04/01/19 09:44	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0016		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:54	5
Barium	1.1		0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:54	5
Cobalt	0.00040	J	0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:54	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:54	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:54	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:54	5
Lithium	0.014		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:54	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		0.50	0.21	mg/L		04/03/19 18:46	04/04/19 19:34	50
Calcium	140		2.5	1.3	mg/L		04/03/19 18:46	04/04/19 19:34	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 13:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3100		40	40	mg/L			03/30/19 13:52	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Client Sample ID: EB-01
Date Collected: 03/27/19 10:30
Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/01/19 06:24	1
Fluoride	<0.026		0.20	0.026	mg/L			04/01/19 06:24	1
Sulfate	0.73	J	1.0	0.38	mg/L			04/01/19 06:24	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/03/19 18:46	04/04/19 13:58	5
Barium	0.00052	J	0.0025	0.00049	mg/L		04/03/19 18:46	04/04/19 13:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:58	5
Calcium	<0.13		0.25	0.13	mg/L		04/03/19 18:46	04/04/19 13:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/03/19 18:46	04/04/19 13:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/03/19 18:46	04/04/19 13:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/03/19 18:46	04/04/19 13:58	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/03/19 18:46	04/04/19 13:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/03/19 18:46	04/04/19 13:58	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/03/19 18:46	04/04/19 13:58	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/03/19 18:46	04/04/19 13:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/03/19 18:46	04/04/19 13:58	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/03/19 18:46	04/04/19 13:58	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/03/19 18:46	04/04/19 19:39	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/02/19 14:10	04/03/19 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/30/19 13:52	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-274458/6
Matrix: Water
Analysis Batch: 274458

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/01/19 05:41	1
Fluoride	<0.026		0.20	0.026	mg/L			04/01/19 05:41	1
Sulfate	<0.38		1.0	0.38	mg/L			04/01/19 05:41	1

Lab Sample ID: LCS 180-274458/5
Matrix: Water
Analysis Batch: 274458

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.8		mg/L		107	90 - 110
Fluoride	1.25	1.34		mg/L		108	90 - 110
Sulfate	25.0	27.1		mg/L		108	90 - 110

Lab Sample ID: 180-88200-4 MS
Matrix: Water
Analysis Batch: 274458

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15		25.0	40.7		mg/L		104	80 - 120
Fluoride	0.49		1.25	1.71		mg/L		98	80 - 120
Sulfate	1.3		25.0	26.5		mg/L		101	80 - 120

Lab Sample ID: 180-88200-4 MSD
Matrix: Water
Analysis Batch: 274458

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15		25.0	40.9		mg/L		104	80 - 120	0	20
Fluoride	0.49		1.25	1.72		mg/L		98	80 - 120	1	20
Sulfate	1.3		25.0	26.8		mg/L		102	80 - 120	1	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-274449/2
Matrix: Water
Analysis Batch: 274449

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			03/30/19 13:52	1

Lab Sample ID: LCS 180-274449/1
Matrix: Water
Analysis Batch: 274449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	304	260		mg/L		86	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

HPLC/IC

Analysis Batch: 274458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total/NA	Water	300.0	
180-88200-4	PZ-2	Total/NA	Water	300.0	
180-88200-5	FB-01	Total/NA	Water	300.0	
180-88200-6	DUP-01	Total/NA	Water	300.0	
180-88200-6	DUP-01	Total/NA	Water	300.0	
180-88200-7	EB-01	Total/NA	Water	300.0	
MB 180-274458/6	Method Blank	Total/NA	Water	300.0	
LCS 180-274458/5	Lab Control Sample	Total/NA	Water	300.0	
180-88200-4 MS	PZ-2	Total/NA	Water	300.0	
180-88200-4 MSD	PZ-2	Total/NA	Water	300.0	

Metals

Prep Batch: 435577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total/NA	Water	7470A	
180-88200-4	PZ-2	Total/NA	Water	7470A	
180-88200-5	FB-01	Total/NA	Water	7470A	
180-88200-6	DUP-01	Total/NA	Water	7470A	
180-88200-7	EB-01	Total/NA	Water	7470A	

Analysis Batch: 435757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total/NA	Water	7470A	435577
180-88200-4	PZ-2	Total/NA	Water	7470A	435577
180-88200-5	FB-01	Total/NA	Water	7470A	435577
180-88200-6	DUP-01	Total/NA	Water	7470A	435577
180-88200-7	EB-01	Total/NA	Water	7470A	435577

Prep Batch: 435792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total Recoverable	Water	3005A	
180-88200-3 - RA	PZ-1	Total Recoverable	Water	3005A	
180-88200-4	PZ-2	Total Recoverable	Water	3005A	
180-88200-4 - RA	PZ-2	Total Recoverable	Water	3005A	
180-88200-5	FB-01	Total Recoverable	Water	3005A	
180-88200-6	DUP-01	Total Recoverable	Water	3005A	
180-88200-6 - DL	DUP-01	Total Recoverable	Water	3005A	
180-88200-7 - RA	EB-01	Total Recoverable	Water	3005A	
180-88200-7	EB-01	Total Recoverable	Water	3005A	

Analysis Batch: 435940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total Recoverable	Water	6020	435792
180-88200-4	PZ-2	Total Recoverable	Water	6020	435792
180-88200-5	FB-01	Total Recoverable	Water	6020	435792
180-88200-6	DUP-01	Total Recoverable	Water	6020	435792
180-88200-7	EB-01	Total Recoverable	Water	6020	435792

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson PZ-1 & PZ-2

Job ID: 180-88200-3
SDG: Ash

Metals

Analysis Batch: 436341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3 - RA	PZ-1	Total Recoverable	Water	6020	435792
180-88200-4 - RA	PZ-2	Total Recoverable	Water	6020	435792
180-88200-6 - DL	DUP-01	Total Recoverable	Water	6020	435792
180-88200-7 - RA	EB-01	Total Recoverable	Water	6020	435792

General Chemistry

Analysis Batch: 274449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total/NA	Water	SM 2540C	
180-88200-4	PZ-2	Total/NA	Water	SM 2540C	
180-88200-5	FB-01	Total/NA	Water	SM 2540C	
180-88200-6	DUP-01	Total/NA	Water	SM 2540C	
180-88200-7	EB-01	Total/NA	Water	SM 2540C	
MB 180-274449/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-274449/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 275566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-3	PZ-1	Total/NA	Water	Field Sampling	
180-88200-4	PZ-2	Total/NA	Water	Field Sampling	

Client Information Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL 35291 Phone: [blank] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: [blank]		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): [blank]		COC No: 180-50334-10589-1 Page: Page 1 of 3 Job #: [blank]	
Due Date Requested: [blank] TAT Requested (days): 3 day Rush PO #: SCS10382506 WO #: [blank] Project #: 18020186 SSOV#: [blank]		Analysis Requested: [blank]		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - Di Water K - EDTA L - EDA Other: [blank]	
Sample Identification Sample ID: APMW-1 Sample Date: 3/27/19 Sample Time: 1000 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, DT=tissue, A=air): Water		Field Filtered Sample (Yes or No): [blank]		Total Number of Containers: [blank]	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For [blank] Months		Special Instructions/Note: 180-88200 Chain of Custody	
Deliverable Requested: I, II, III, IV, Other (specify) [blank]		Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Special Instructions/QC Requirements: [blank]	
Date/Time: 3/27/19 1415 Date/Time: [blank] Date/Time: [blank]		Received by: [Signature] Received by: [Signature] Received by: [Signature]		Method of Shipment: [blank]	
Company: RPM Company: [blank] Company: [blank]		Date/Time: 3/28/19 Date/Time: 895 Date/Time: [blank]		Company: [blank] Company: [blank] Company: [blank]	
Custody Seals Intact: [blank] Custody Seal No.: [blank]		Cooler Temperature(s) °C and Other Remarks: [blank]		Ver: 01/16/2019	



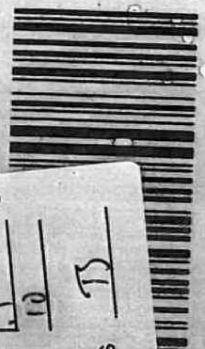
Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 180-50334-10589.1 Page: Page 2 of 3		
Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested Total Number of Containers:				
Sample Identification APMW-2-1E APMW-1R		Sample Date: 3/27/19 Sample Time: 0902 Sample Type (C=Comp, G=grab): G Matrix (Water, Sewage, Solid, Other): Water	Field Filtered Sample (Yes or No): 6020, 7470A 2540C, Calcd, 300 ORGFM, 28D 9315, Ra226, 9320, Ra228	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify) Other:	Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						
Deliverable Requested: I, II, III, IV, Other (specify)						
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: Relinquished by:		Special Instructions/QC Requirements <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Method of Shipment:				
Date/Time: 3/27/19 1415 Date/Time: Date/Time:		Received by: [Signature] Received by: Received by:				
Company: PDH Company: Company:		Date/Time: 3-28-19 Company: [Signature] Date/Time: 8:45 Company:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:				

Client Information Client Contact: Philip Evans Phone: 850-336-0172 E-Mail: veronica.bortot@testamericainc.com Job #1: Bortot, Veronica		SOC No: 180-50334-10589 1 Page 1 of 3 Job #	
Address: PO BOX 2641 GSCB City: Birmingham State: AL 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382605 WO #: 18020186 SSOV#:	
Sample Identification APMW-1 Barcode: 180-88200-B-1 Location: 11DD Bottle: Plastic 500ml - unreserved Sampled: 3/27/2019 10:00 AM 180-312-587		Matrix: Water Sample Type (C=Comp, G=grab): G Sample Time: 1000 Sample Date: 3/27/19 Preservation Code:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/Note: 180-88200 Chain of Custody	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Analysis Requested Total Number of Containers: X	
Field Filtered Sample (Yes or No) 5020, 7470A X X 2540C, Caled, 300 ORGM 280 X X 9315, Ra226 9320, Ra228 X Y		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - NaOH G - Acetic H - Acetic Acid I - Ice J - DI Water K - EDTA L - EDTA Other:	
Relinquished by Date/Time: 3/27/19 1415 Company: RPT		Relinquished by: [Signature] Date/Time: 3/27/19 8:15 Company: TAPCO	
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:	
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:	
Custody Seals Intact Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



XH AGCA

15238
PA-US
PIT



Uncorrected temp _____ °C
 Thermometer ID 10
 CF U Initials TS
 PT-WI-SR-001 effective 11/8/18

4930000 09/27 50631/4093/23AD



TO SAMPLE RECEIVING
 TEST AMERICA PITTSBURGH
 301 ALPHA DR.
 RETURNS
 PITTSBURGH PA 15238
 REF: (412) 968-7068
 INVT: (412) 968-7068
 RMA: 11111111

ORIGIN ID: MULA (B50) 336-0192
 NICK HAGENDORFER
 RCH
 5220 DOVE DRIVE
 PAGE, FL 32571
 UNITED STATES US
 SHIP DATE: 19MARI19
 ACTWGT: 17.00 LB
 CAD: 859116/CAFE3211

IT2 EXP 10/19

1RCK:4651 0060 8861

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Part # 156297-435 RITZ 07/15
952/6396/11596

SHIP DATE: 27MAR19
ACT WT: 46.70 LB
CAD: 008993789/SSFE2002
DIMS: 21x13x14 IN
BILL RECIPIENT

ORIGIN ID: BIXA (850) 336-0192
RDH ENVIRONMENTAL
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

TO
SAMPLE RECEIVING RETURN
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238

REF: (412) 969-7058
INSTR. POI



FedEx Express



AN LGZ010610161F

THU - 28 MAR 3:00P
STANDARD OVERNIGHT

TRK# 7862 8976 3053
0201

XH AGCA

15238
PA-US
PIT



Uncorrected temp 1.8 °C
Thermometer ID 10
CF 0 Initials B

PT-WJ-SR-001 effective 11/18/18

RUSH

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 11
- 12
- 13

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-3

SDG Number: Ash

Login Number: 88200

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-3

SDG Number: Ash

Login Number: 88200

List Number: 2

Creator: Brown, Nathan

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/02/19 01:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	12.5°C, 13.5°C, 13.2°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88200-4
Laboratory Sample Delivery Group: Ash
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Corey Ladner



Authorized for release by:
7/31/2019 4:39:03 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Job ID: 180-88200-4

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88200-4

Comments

No additional comments.

Receipt

The samples were received on 3/28/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.8° C.

Receipt Exceptions

The following samples were submitted for analysis; however, they were not listed on the Chain-of-Custody (COC): FB-01 (180-88200-5), DUP-01 (180-88200-6) and EB-01 (180-88200-7) They were added to the login and given the analysis listed on the labels.

RAD

Method(s) 903.0, 9315: Radium-226 Prep Batch 160-423868

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1 (180-88200-1), APMW-1R (180-88200-2), PZ-1 (180-88200-3), PZ-2 (180-88200-4), FB-01 (180-88200-5), DUP-01 (180-88200-6), EB-01 (180-88200-7), (LCS 160-423868/1-A), (LCSD 160-423868/2-A) and (MB 160-423868/15-A)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-423900

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1 (180-88200-1), APMW-1R (180-88200-2), PZ-1 (180-88200-3), PZ-2 (180-88200-4), FB-01 (180-88200-5), DUP-01 (180-88200-6), EB-01 (180-88200-7), (LCS 160-423900/1-A), (LCSD 160-423900/2-A) and (MB 160-423900/15-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-423900:

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (180-88200-1), APMW-1R (180-88200-2), PZ-1 (180-88200-3), PZ-2 (180-88200-4), FB-01 (180-88200-5), DUP-01 (180-88200-6) and EB-01 (180-88200-7). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-423868:

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (180-88200-1), APMW-1R (180-88200-2), PZ-1 (180-88200-3), PZ-2 (180-88200-4), FB-01 (180-88200-5), DUP-01 (180-88200-6) and EB-01 (180-88200-7). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	06-04-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Hawaii	State Program	9	NA	06-30-19 *
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Michigan	State Program	5	9005	06-30-19 *
Missouri	State Program	7	780	06-30-20
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-20
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-20
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-88200-2	APMW-1R	Water	03/27/19 09:02	03/28/19 08:45	
180-88200-3	PZ-1	Water	03/27/19 13:05	03/28/19 08:45	
180-88200-4	PZ-2	Water	03/27/19 11:40	03/28/19 08:45	
180-88200-5	FB-01	Water	03/27/19 09:55	03/28/19 08:45	
180-88200-6	DUP-01	Water	03/27/19 08:02	03/28/19 08:45	
180-88200-7	EB-01	Water	03/27/19 10:30	03/28/19 08:45	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: APMW-1R

Lab Sample ID: 180-88200-2

Date Collected: 03/27/19 09:02

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.51 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.51 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426331	05/01/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-1

Lab Sample ID: 180-88200-3

Date Collected: 03/27/19 13:05

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.95 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			999.95 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426331	05/01/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-88200-4

Date Collected: 03/27/19 11:40

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.86 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			999.86 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426331	05/01/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: FB-01

Lab Sample ID: 180-88200-5

Date Collected: 03/27/19 09:55

Matrix: Water

Date Received: 03/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.97 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: FB-01

Date Collected: 03/27/19 09:55

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			999.97 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426331	05/01/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Date Collected: 03/27/19 08:02

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.01 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.01 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426331	05/01/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Date Collected: 03/27/19 10:30

Date Received: 03/28/19 08:45

Lab Sample ID: 180-88200-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.93 mL	1.0 g	423868	04/15/19 13:29	JLC	TAL SL
Total/NA	Analysis	9315		1			427870	05/10/19 11:17	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			999.93 mL	1.0 g	423900	04/15/19 15:49	JLC	TAL SL
Total/NA	Analysis	9320		1			426332	05/01/19 15:59	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			428134	05/13/19 16:49	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

JLC = Jessica Chapman

Batch Type: Analysis

CDR = Conrad Reuscher

KLS = Kody Saulters

SMP = Siobhan Perry

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: APMW-1R

Lab Sample ID: 180-88200-2

Date Collected: 03/27/19 09:02

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.51		0.318	0.448	1.00	0.0808	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.04		0.454	0.533	1.00	0.430	pCi/L	04/15/19 15:49	05/01/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/15/19 15:49	05/01/19 15:58	1
Y Carrier	81.5		40 - 110					04/15/19 15:49	05/01/19 15:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.56		0.554	0.696	5.00	0.430	pCi/L		05/13/19 16:49	1

Client Sample ID: PZ-1

Lab Sample ID: 180-88200-3

Date Collected: 03/27/19 13:05

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.150		0.0752	0.0764	1.00	0.0810	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.349	U	0.270	0.272	1.00	0.426	pCi/L	04/15/19 15:49	05/01/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					04/15/19 15:49	05/01/19 15:58	1
Y Carrier	84.1		40 - 110					04/15/19 15:49	05/01/19 15:58	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: PZ-1

Lab Sample ID: 180-88200-3

Date Collected: 03/27/19 13:05

Matrix: Water

Date Received: 03/28/19 08:45

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.499		0.280	0.283	5.00	0.426	pCi/L		05/13/19 16:49	1

Client Sample ID: PZ-2

Lab Sample ID: 180-88200-4

Date Collected: 03/27/19 11:40

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.177		0.0843	0.0858	1.00	0.0875	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.128	U	0.222	0.223	1.00	0.378	pCi/L	04/15/19 15:49	05/01/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					04/15/19 15:49	05/01/19 15:58	1
Y Carrier	82.6		40 - 110					04/15/19 15:49	05/01/19 15:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.306	U	0.237	0.239	5.00	0.378	pCi/L		05/13/19 16:49	1

Client Sample ID: FB-01

Lab Sample ID: 180-88200-5

Date Collected: 03/27/19 09:55

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00140	U	0.0329	0.0329	1.00	0.0741	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: FB-01

Lab Sample ID: 180-88200-5

Date Collected: 03/27/19 09:55

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.118	U	0.218	0.218	1.00	0.372	pCi/L	04/15/19 15:49	05/01/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					04/15/19 15:49	05/01/19 15:58	1
Y Carrier	78.9		40 - 110					04/15/19 15:49	05/01/19 15:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.120	U	0.220	0.220	5.00	0.372	pCi/L		05/13/19 16:49	1

Client Sample ID: DUP-01

Lab Sample ID: 180-88200-6

Date Collected: 03/27/19 08:02

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.16		0.298	0.412	1.00	0.0776	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.15		0.433	0.521	1.00	0.405	pCi/L	04/15/19 15:49	05/01/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/15/19 15:49	05/01/19 15:58	1
Y Carrier	83.4		40 - 110					04/15/19 15:49	05/01/19 15:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.30		0.526	0.664	5.00	0.405	pCi/L		05/13/19 16:49	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Client Sample ID: EB-01

Lab Sample ID: 180-88200-7

Date Collected: 03/27/19 10:30

Matrix: Water

Date Received: 03/28/19 08:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0291	U	0.0620	0.0620	1.00	0.112	pCi/L	04/15/19 13:29	05/10/19 11:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/15/19 13:29	05/10/19 11:17	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.169	U	0.240	0.241	1.00	0.403	pCi/L	04/15/19 15:49	05/01/19 15:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/15/19 15:49	05/01/19 15:59	1
Y Carrier	80.7		40 - 110					04/15/19 15:49	05/01/19 15:59	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.198	U	0.248	0.249	5.00	0.403	pCi/L		05/13/19 16:49	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-423868/15-A
Matrix: Water
Analysis Batch: 428032

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 423868

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03560	U	0.0481	0.0482	1.00	0.0806	pCi/L	04/15/19 13:29	05/11/19 18:29	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	86.1		40 - 110		04/15/19 13:29	05/11/19 18:29	1			

Lab Sample ID: LCS 160-423868/1-A
Matrix: Water
Analysis Batch: 427870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 423868

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	8.465		0.915	1.00	0.103	pCi/L	75	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.4		40 - 110						

Lab Sample ID: LCSD 160-423868/2-A
Matrix: Water
Analysis Batch: 427870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 423868

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER
				Uncert. (2σ+/-)							Limit
Radium-226	11.4	9.382		0.995	1.00	0.0939	pCi/L	83	75 - 125	0.48	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	90.0		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-423900/15-A
Matrix: Water
Analysis Batch: 426332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 423900

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.08801	U	0.291	0.291	1.00	0.533	pCi/L	04/15/19 15:49	05/01/19 16:00	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	86.1		40 - 110		04/15/19 15:49	05/01/19 16:00	1			
Y Carrier	80.4		40 - 110		04/15/19 15:49	05/01/19 16:00	1			

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
 SDG: Ash

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-423900/1-A
Matrix: Water
Analysis Batch: 426331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 423900

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.25	7.885		0.975	1.00	0.407	pCi/L	85	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.4		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: LCSD 160-423900/2-A
Matrix: Water
Analysis Batch: 426331

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 423900

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.25	9.079		1.10	1.00	0.461	pCi/L	98	75 - 125	0.58	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	90.0		40 - 110
Y Carrier	83.4		40 - 110

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88200-4
SDG: Ash

Rad

Prep Batch: 423868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	PrecSep-21	
180-88200-3	PZ-1	Total/NA	Water	PrecSep-21	
180-88200-4	PZ-2	Total/NA	Water	PrecSep-21	
180-88200-5	FB-01	Total/NA	Water	PrecSep-21	
180-88200-6	DUP-01	Total/NA	Water	PrecSep-21	
180-88200-7	EB-01	Total/NA	Water	PrecSep-21	

Prep Batch: 423900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88200-2	APMW-1R	Total/NA	Water	PrecSep_0	
180-88200-3	PZ-1	Total/NA	Water	PrecSep_0	
180-88200-4	PZ-2	Total/NA	Water	PrecSep_0	
180-88200-5	FB-01	Total/NA	Water	PrecSep_0	
180-88200-6	DUP-01	Total/NA	Water	PrecSep_0	
180-88200-7	EB-01	Total/NA	Water	PrecSep_0	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): Job #:		COC No: 180-50334-10589.1 Page: Page 2 of 3	
Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382606 WO #:		Analysis Requested 6020, 7470A 2540C, Calcd, 300 ORGFM, 28D 9315, Ra226, 9320, Ra228		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification Sample Date: 3/27/19 Sample Time: 0902 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=material, BT=Tissue, A=Air): Water Field Filtered Sample (Yes or No): Preservation Code:		Total Number of Containers:		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Empty Kit Reinquished by: Reinquished by: [Signature] Reinquished by: Reinquished by:		Date: 3/27/19 1415 Date/Time: 3/27/19 1415 Date/Time:		Method of Shipment:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:		Received by: [Signature] Company: PDH Received by: [Signature] Company: PDH Received by: [Signature] Company: PDH	

Client Information
 Client Contact: Philip Evans
 City: Bortot, Veronica
 Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: 850-336-0922
 Email: veronica.bortot@testamericainc.com
 Lab PM: Bortot, Veronica
 E-Mail: veronica.bortot@testamericainc.com

Sample Information
 Sampler: Philip Evans
 Phone: 850-336-0922
 Carrier (tracking No(s))

Job Information
 COC No: 180-50334-10589.1
 Page: 3 of 3
 Job #:

Due Date Requested: 3 day Rush
 TAT Requested (days): 3 day Rush

Project Information
 PO #: SCS10382606
 WO #: 18020186
 Project #: 18020186
 SSO#:

Sample Identification
 Sample ID: PZ-1, PZ-2
 Sample Date: 3/27/19
 Sample Time: 1305 G, 1140 G
 Matrix: Water
 Sample Type: C=comp, G=grab

Analysis Requested

Field Filtered Sample Type (Yes or No)	Sample ID	Sample Date	Sample Time	Sample Type	Matrix	Preservation Code	Field No.
X	6020_7470A			G	Water	D N D	9315 Ra226 9320 Ra228
X	2540C_Calcd_300_ORGFM_28D			G	Water		

Special Instructions/Note:

Preservation Codes:
 A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2OAS, Q - Na2SO3, R - Na2SO4, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4.5, Z - other (specify)

Special Instructions/Note:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by: [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]

Custody Seals Intact:
 Yes No
 Custody Seal No.:

Method of Shipment:
 Received by: [Signature]
 Date/Time: 3/28/19
 Company: JAPA
 Received by: [Signature]
 Date/Time: 3/28/19
 Company: JAPA
 Received by: [Signature]
 Date/Time: 3/28/19
 Company: JAPA

Cooler Temperature(s): °C and Other Remarks:



Client Information Client Contact: Philip Evans Phone: 850-336-0172 E-Mail: veronica.bortot@testamericainc.com Job #1: Bortot, Veronica		SOC No: 180-50334-10589 1 Page 1 of 3 Job #	
Address: PO BOX 2641 GSCB City: Birmingham State: AL 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Due Date Requested: TAT Requested (days): 3 day Rush PO #: SCS10382605 WO #: 18020186 Project #: 18020186 SSOV#:	
Sample Identification APMW-1 Barcode: 180-88200-B-1 Location: 11DD Bottle: Plastic 500ml - unreserved Sampled: 3/27/2019 10:00 AM 180-312-587		Matrix: Water Sample Type (C=Comp, G=grab): G Sample Time: 1000 G Sample Date: 3/27/19 Preservation Code:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/Note: Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/OC Requirements	
Empty Kit Relinquished by Relinquished by Relinquished by Relinquished by		Method of Shipment Received by: Deliversly 528779 Date/Time: 3/27/19 1415 Company: RPT Received by: 815 Date/Time: 815 Company: Company Received by: Company Date/Time: Company	
Custody Seals Intact Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks	



XH AGCA

15238
PA-US
PIT



Uncorrected temp _____ °C
Thermometer ID 10
CF U Initials TS
PT-WI-SR-001 effective 11/8/18

4930088 09/27 5851/4852/33AD



TO SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR.
PITTSBURGH PA 15238
RETURNS
PITTSBURGH PA 15238
RMA: 1111111111
INVT: (412) 968-7068
REF: PO: DEPT:

ORIGIN ID: MULA (850) 336-0192
NICK HAGENDOERFER
RDH
5220 DOVE DRIVE
PAGE, FL 32571
UNITED STATES US
SHIP DATE: 19MARI19
ACTWGT: 17.00 LB
CAD: 859116/CAFE3211

IT2 EXP 10/19

1RCK:4651 0060 8861

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Part # 156297-435 RITZ 07/15
952/639/1159

SHIP DATE: 27MAR19
ACT WT: 46.70 LB
CAD: 008993789/SSFE2002
DIMS: 21x13x14 IN
BILL RECIPIENT

ORIGIN ID: BIXA (850) 336-0192
RDH ENVIRONMENTAL
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

TO
SAMPLE RECEIVING RETURN
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238

REF: (412) 969-7058
INVT. PO:

DEPT:



FedEx
Express



AN LGZ010610161F

THU - 28 MAR 3:00P
STANDARD OVERNIGHT

TRK# 7862 8976 3053
0201

XH AGCA

15238
PA-US
PIT



Uncorrected temp 1.8 °C
Thermometer ID 10
CF 0 Initials B

PT-WJ-SR-001 effective 11/18/18

RUSH

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-4

SDG Number: Ash

Login Number: 88200

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88200-4

SDG Number: Ash

Login Number: 88200

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/02/19 02:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88629-3
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
4/30/2019 9:43:30 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Job ID: 180-88629-3

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-88629-3**

Comments

No additional comments.

Receipt

The samples were received on 4/5/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.9° C, 3.3° C, 3.4° C and 4.0° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020, SM 2340B: The following sample was diluted to bring the concentration of target analytes within the calibration range: APMW-1R (180-88629-13). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88629-13	APMW-1R	Water	04/03/19 15:00	04/05/19 09:00

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Client Sample ID: APMW-1R

Lab Sample ID: 180-88629-13

Date Collected: 04/03/19 15:00

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			275438	04/11/19 15:23	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Analysis	300.0		5			275568	04/12/19 10:24	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/16/19 16:06	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50			437398	04/16/19 17:02	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	436917	04/12/19 12:36	JAP	TAL PEN
Total/NA	Analysis	7470A		1			437226	04/15/19 14:18	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	275414	04/10/19 15:29	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			276425	04/03/19 15:00	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

FDS = Sampler Field

MJH = Matthew Hartman

TAM = Tessa Mastalski

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Client Sample ID: APMW-1R

Lab Sample ID: 180-88629-13

Date Collected: 04/03/19 15:00

Matrix: Water

Date Received: 04/05/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			04/11/19 15:23	50
Fluoride	<0.13		1.0	0.13	mg/L			04/12/19 10:24	5
Sulfate	4.6	J	5.0	1.9	mg/L			04/12/19 10:24	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 16:06	5
Barium	1.1		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 16:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:06	5
Cobalt	0.00040	J	0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 16:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 16:06	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 16:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 16:06	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 16:06	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 16:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 16:06	5
Lithium	0.010		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 16:06	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.3		0.50	0.21	mg/L		04/12/19 14:05	04/16/19 17:02	50
Calcium	140		2.5	1.3	mg/L		04/12/19 14:05	04/16/19 17:02	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 14:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3600		40	40	mg/L			04/10/19 15:29	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.56				SU			04/03/19 15:00	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275438/5
Matrix: Water
Analysis Batch: 275438

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/11/19 06:02	1
Fluoride	<0.026		0.20	0.026	mg/L			04/11/19 06:02	1
Sulfate	<0.38		1.0	0.38	mg/L			04/11/19 06:02	1

Lab Sample ID: LCS 180-275438/6
Matrix: Water
Analysis Batch: 275438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.6		mg/L		102	90 - 110
Fluoride	1.25	1.15		mg/L		92	90 - 110
Sulfate	25.0	25.1		mg/L		100	90 - 110

Lab Sample ID: MB 180-275568/5
Matrix: Water
Analysis Batch: 275568

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			04/12/19 05:22	1
Sulfate	<0.38		1.0	0.38	mg/L			04/12/19 05:22	1

Lab Sample ID: LCS 180-275568/6
Matrix: Water
Analysis Batch: 275568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.15		mg/L		92	90 - 110
Sulfate	25.0	24.9		mg/L		100	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436902/1-A ^5
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 14:35	5
Boron	<0.021		0.050	0.021	mg/L		04/12/19 14:05	04/16/19 14:35	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 14:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Calcium	<0.13		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 14:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 14:35	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 14:35	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 14:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: LCS 400-436902/2-A
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Arsenic	0.0500	0.0506		mg/L		101	80 - 120	
Boron	0.100	0.0984		mg/L		98	80 - 120	
Barium	0.0500	0.0479		mg/L		96	80 - 120	
Beryllium	0.0500	0.0479		mg/L		96	80 - 120	
Calcium	5.00	4.95		mg/L		99	80 - 120	
Cadmium	0.0500	0.0499		mg/L		100	80 - 120	
Cobalt	0.0500	0.0519		mg/L		104	80 - 120	
Chromium	0.0500	0.0498		mg/L		100	80 - 120	
Molybdenum	0.0500	0.0498		mg/L		100	80 - 120	
Lead	0.0500	0.0485		mg/L		97	80 - 120	
Antimony	0.0500	0.0478		mg/L		96	80 - 120	
Selenium	0.0500	0.0575		mg/L		115	80 - 120	
Thallium	0.0100	0.00929		mg/L		93	80 - 120	
Lithium	0.0500	0.0482		mg/L		96	80 - 120	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-436917/14-A
Matrix: Water
Analysis Batch: 437226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436917

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 13:29	1

Lab Sample ID: LCS 400-436917/15-A
Matrix: Water
Analysis Batch: 437226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436917

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Mercury	0.00101	0.000958		mg/L		95	80 - 120	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-275414/2
Matrix: Water
Analysis Batch: 275414

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<10		10	10	mg/L			04/10/19 15:29	1

Lab Sample ID: LCS 180-275414/1
Matrix: Water
Analysis Batch: 275414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Total Dissolved Solids	201	192		mg/L		96	80 - 120	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-3

HPLC/IC

Analysis Batch: 275438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	300.0	
MB 180-275438/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275438/6	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 275568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	300.0	
MB 180-275568/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275568/6	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 436902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total Recoverable	Water	3005A	
180-88629-13 - DL	APMW-1R	Total Recoverable	Water	3005A	
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 436917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	7470A	
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 437226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	7470A	436917
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	436917
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	436917

Analysis Batch: 437398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total Recoverable	Water	6020	436902
180-88629-13 - DL	APMW-1R	Total Recoverable	Water	6020	436902
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	6020	436902
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	6020	436902

General Chemistry

Analysis Batch: 275414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	SM 2540C	
MB 180-275414/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-275414/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 276425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-336-0192		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Camer Tracking No(s): COC No: 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382605 WO #:		Analysis Requested 6020, 7470A 2540C, Calcd, 300, ORGFM, 28D 9315, Ra226, 9320, Ra228 APX-3 APX-4	
Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification APMW-1R Sample Date: 4/3/19 Sample Time: 1500 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=solid, O=oil, BT=Blood, A=Air): Water		Field Filtered Sample (Yes or No): D N D X X Y X X Special Instructions/Note: 180-88629-03 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Method of Shipment: Date/Time: 4-5-19 Date/Time: 900 Date/Time:	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Received by: [Signature] Received by: [Signature] Received by:	
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



ORIGIN ID:BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 59.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 130297/0827/SA2/TF1995 12/19

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283
(412) 963-7058
INV:

15238

Uncorrected temp
Thermometer ID

2.9 °C
10

CFT H-O Initials IN

PT-WI-SR-001 effective 11/5/18



FedEx
Express



AN10J010610161F

04:05
4660

15:00
NEW

4 of 4
MPS# 7864 4788 4660
0263
Mstr# 7864 4788 4638

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

0201

~~XITPITA~~

15283
PA-US PIT

FedEx
TRK# 7864 4788 4660
0201

AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 626260 05APR19 PITA 653C1/D7E5/OC9A

Align Open End of FedEx Barcode Here



180-88629 Waybill

ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 70.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

BLN 5551707ES/2330 12/18

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

15238

(412) 963-7068

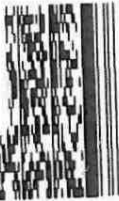
REF:

Uncorrected temp
Thermometer ID

4.0 °C
10

CF H-O

Initials JN

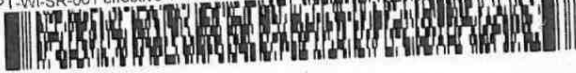


FedEx
Express



RT NEW 15:00
FZ 4650
04.05

PT-WI-SR-001 effective 11/8/18



3 of 4

MPS# 7864 4788 4650

Mstr# 7864 4788 4638

0201

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

~~XII PITA~~

15283
PA-US PIT

FedEx

TRK# 7864 4788 4650

STANDARD OVERNIGHT

AA

65 AGCA

15238
PA-US
PIT



FID 626268 05APR19 PITA 663C1/D7E5/UCBA

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- 2
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- 10
- 11
- 12
- 13

ORIGIN: MILTON (850) 336-0192
RICK HEGEMORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04/01/19
ACT WGT: 62.00 LB
CAL: 006993799/SSFE2002
DIM: 25x14x14 IN
BILL THIRD PARTY

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RET'L'NS
301 ALPHA DR

PITTSBURGH PA 15283

15238

Uncorrected temp 3.3 °C
Thermometer ID 10

CF HW Initials JN



2 of 4
MP# 7864 4788 4649
0263

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

FedEx
TRK# 7864 4788 4649
0201

AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 626268 06APR19 PITA 663C1/D7E6/0C8A

NEW 16:00 4649 04:05
FZ

- 1
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- 10
- 11
- 12
- 13

ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 64.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN
BILL THIRD PARTY

PLD # 158257 AREZ/SALD/11595 12/13

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15238 REF: **15238**
(412) 983-7068

Uncorrected temp 3.4 °C
Thermometer ID 10

CF H-O Initials TN

PT-WL-SR-001 effective 11/8/18



1 of 4 **FRI - 05 APR 3:00P**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

FedEx **FRI - 05 APR AA**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

65 AGCA **15238**
PA-US
PIT



FID 106442 05APR19 PITA 553C1/D7E5/0C8A

15:00
4
04

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- 12
- 13

Chain of Custody Record

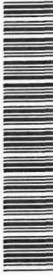


Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com State of Origin: Georgia Accreditations Required (See note):		Carrier Tracking No(s): COC No: 180-359679.1 Page: Page 1 of 1 Job #: 180-88629-3	
Due Date Requested: 4/11/2019 TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
PO #: WO #: Project #: 18020186 SSOV#:		Matrix (W=water, S=solid, O=waste/oi, BT=Tissue, A=Air) Sample Type (C=comp, G=grab) Sample Time: 15:00 Eastern Preservation Code: Water		Total Number of containers: 1	
Sample Date: 4/3/19		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Sample ID (Lab ID): APMW-1R (180-88629-13)		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
SBA, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Ti, V		7470A/7470A_Prep		Special Instructions/Note:	
602030054 (MOD)		X		Special Instructions/Note:	
X		X		Special Instructions/Note:	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2 Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date/Time: 4/10/19 17:00 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Received by: _____ Date/Time: 4-11-19 8:44 Received by: _____ Date/Time: _____ Received by: _____ Date/Time: _____	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 0.3°C FA7	





Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:		Phone:	Bortot, Veronica	State of Origin:	180-359679.1
Shipping/Receiving		E-Mail:	veronica.bortot@testamericainc.com	Georga	Page: Page 1 of 1
Company:		Accreditations Required (See note):		Job #:	180-88629-5
Address:		Due Date Requested:		Preservation Codes:	
3355 McLemore Drive,		4/11/2019		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
City:		TAT Requested (days):		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State, Zip:		PO #:			
FL, 32514		WO #:			
Phone:		Project #:			
850-474-1001(Tel) 850-478-2671(Fax)		18020186			
Email:		SSOW#:			
Project Name:		Sample Date		Total Number of Containers	
CCR - Plant Watson		4/3/19		1	
Site:		Sample Time		Special Instructions/Note:	
		12:40 Eastern			
Sample Identification - Client ID (Lab ID)		Sample Type (C=comp, G=grab) BT=Tissue, AsAir			
PZ-1 (180-88629-14)		Water			
PZ-2 (180-88629-15)		Water			
DUP-01 (180-88629-16)		Water			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____

Relinquished by: *BLM* Date/Time: 4/10/19 1700 Company: *Juniper* Company
 Relinquished by: *Butter R Away* Date/Time: 4-11-19 844 Company: *TA* Company
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No No
 Cooler Temperature(s) °C and Other Remarks: *0.3°C - JK7*



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-3

Login Number: 88629

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-3

Login Number: 88629
List Number: 3
Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola
List Creation: 04/11/19 04:59 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88629-4

Laboratory Sample Delivery Group: Surface Water
Client Project/Site: CCR - Plant Watson

For:

Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
5/31/2019 5:48:08 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Job ID: 180-88629-4

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88629-4

Comments

No additional comments.

Receipt

The samples were received on 4/5/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.9° C, 3.3° C, 3.4° C and 4.0° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-424949

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. APMW-1R (180-88629-13), (LCS 160-424949/1-A), (LCSD 160-424949/2-A) and (MB 160-424949/23-A)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-424953

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. APMW-1R (180-88629-13), (LCS 160-424953/1-A), (LCSD 160-424953/2-A) and (MB 160-424953/23-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-424953:

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1R (180-88629-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-424949:

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1R (180-88629-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19 *
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-88629-13	APMW-1R	Water	04/03/19 15:00	04/05/19 09:00	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
 SDG: Surface Water

Client Sample ID: APMW-1R

Lab Sample ID: 180-88629-13

Date Collected: 04/03/19 15:00

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.16 mL	1.0 g	424949	04/22/19 12:18	JLC	TAL SL
Total/NA	Analysis	9315		1			429043	05/18/19 21:59	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.16 mL	1.0 g	424953	04/22/19 12:52	JLC	TAL SL
Total/NA	Analysis	9320		1			427793	05/09/19 08:45	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429081	05/20/19 08:48	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

JLC = Jessica Chapman

Batch Type: Analysis

CDR = Conrad Reuscher

SMP = Siobhan Perry

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Client Sample ID: APMW-1R

Lab Sample ID: 180-88629-13

Date Collected: 04/03/19 15:00

Matrix: Water

Date Received: 04/05/19 09:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.23		0.288	0.410	1.00	0.0705	pCi/L	04/22/19 12:18	05/18/19 21:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					04/22/19 12:18	05/18/19 21:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.80		0.412	0.541	1.00	0.307	pCi/L	04/22/19 12:52	05/09/19 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					04/22/19 12:52	05/09/19 08:45	1
Y Carrier	87.5		40 - 110					04/22/19 12:52	05/09/19 08:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.03		0.503	0.679	5.00	0.307	pCi/L		05/20/19 08:48	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-424949/23-A
Matrix: Water
Analysis Batch: 429045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424949

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04549	U	0.0674	0.0675	1.00	0.115	pCi/L	04/22/19 12:18	05/18/19 21:52	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/22/19 12:18	05/18/19 21:52	1
	109									

Lab Sample ID: LCS 160-424949/1-A
Matrix: Water
Analysis Batch: 429039

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424949

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.893		1.04	1.00	0.0943	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-424949/2-A
Matrix: Water
Analysis Batch: 429039

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424949

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER
				Uncert. (2σ+/-)							Limit
Radium-226	11.4	9.274		0.972	1.00	0.0830	pCi/L	82	75 - 125	0.31	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-424953/23-A
Matrix: Water
Analysis Batch: 427793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424953

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3031	U	0.205	0.207	1.00	0.317	pCi/L	04/22/19 12:52	05/09/19 08:49	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/22/19 12:52	05/09/19 08:49	1
Y Carrier	86.4		40 - 110					04/22/19 12:52	05/09/19 08:49	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
 SDG: Surface Water

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-424953/1-A
Matrix: Water
Analysis Batch: 427795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.23	8.758		1.00	1.00	0.374	pCi/L	95	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	97.6		40 - 110

Lab Sample ID: LCSD 160-424953/2-A
Matrix: Water
Analysis Batch: 427795

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.23	9.013		1.02	1.00	0.345	pCi/L	98	75 - 125	0.13	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	92.3		40 - 110

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-4
SDG: Surface Water

Rad

Prep Batch: 424949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	PrecSep-21	
MB 160-424949/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-424949/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-424949/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 424953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-13	APMW-1R	Total/NA	Water	PrecSep_0	
MB 160-424953/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-424953/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-424953/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): COC No: 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY PO # 10382608 SCS-10382608 WO # Project #: 18020186 SSOW#		Analysis Requested Field Filtered Sample (Yes or No): 6020_7470A 2540C_Calcd_300_ORGM_28D 9315_Ra226_9320_Ra228 APPEX 3 APPEX 4	
Sample Identification SW-1 SW-2 SW-3 SW-4 SW-5 SW-6 SW-7 SW-8 DWP-01 EB-01 SW-3		Matrix (W=water, S=solid, O=oil, D=dust, A=air) Water Water Water Water Water Water Water Water Water Water	
Sample Date 4-3-19 4-3-19 4-3-19 4-3-19 4-2-19 4-2-19 4-2-19 4-3-19 4-3-19 4-3-19 4-3-19		Sample Time 0227 0245 0120 0040 2301 2327 2350 0018 0145 1546 1650	
Sample Type (C=Comp, G=grab) G G G G G G G G G G G		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - ... L - EDTA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4.5	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/Note: 180-88829-01 Chain of Custody	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Received by: Julie Watson Received by: [Signature] Received by:	
Date/Time: 4-4-19 0915 Date/Time: Date/Time:		Date/Time: 4-5-19 9:00 Date/Time: Date/Time:	
Company: [Signature] Company: [Signature] Company:		Company: JAD Company: Company:	
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: [Redacted] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site: [Redacted]		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): [Redacted]		COC No: 180-50457-10589.1 Page: [Redacted] Page # of [Redacted] Job #: [Redacted]	
Due Date Requested: TAT Requested (days): 3 Day Rush PO #: SCS10382606 WO #: [Redacted] Project #: 18020186 SSOW#: [Redacted]		Analysis Requested Appendix 3 Appendix 4 9315_R4226_9320_R4228 2540C_Calcd_300_ORGFM_280 6020_7470A Field Filtered Sample (Yes or No) [X]			
Sample Identification SW-4 Sample Date: 4-3-19 Sample Time: 1725 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=washoil, BT=flame, A=air): Water		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: [Redacted]			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For [Redacted] Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by: [Redacted]		Method of Shipment:			
Relinquished by: [Redacted]		Date: 4-4-19 0815		Received by: Denise Watson Date/Time: 4-5-19	
Relinquished by: [Redacted]		Date/Time: 4-4-19 0815		Received by: [Redacted]	
Relinquished by: [Redacted]		Date/Time: [Redacted]		Received by: [Redacted]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-336-0192		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Camer Tracking No(s): 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH		Analysis Requested	
PO #: SCS10382605 WO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Project #: 18020186 SOW#:		Special Instructions/Note: 180-88629-03 Chain of Custody	
Sample Identification APMW-1R Sample Date: 4/3/19 Sample Time: 1500 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=solid, O=oil, BT=Blood, A=Air): Water		Field Filtered Sample (Yes or No): 6020, 7470A 2540C, Calcd, 300, ORGFM, 28D 9315, Ra226, 9320, Ra228 APX-3 APX-4 Number of containers:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 4-4-19 0917 Company: APH EM		Received by: [Signature] Date/Time: 4-5-19 900 Company: [Signature]	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No		Custody Seal No.:	



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERN.CO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): COC No: 180-50457-10589-1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382606 W/O #:		Analysis Requested 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGM_28D 6020_7470A Field Filtered Sample (Yes or No)	
Sample Identification PZ-1 PZ-2 Dup-01		Sample Date 4/3/19 4/3/19 4/3/19	
Sample Time 1240 1350 1140		Sample Type (C=Comp, G=grab) G G G	
Matrix (W=water, S=solid, O=washoil, RT=Residue, A=Air) Water Water Water Water Water		Preservation Code X X X X X	
Special Instructions/Note: 180-88629-04 Chain of Custody		Total Number of Containers:	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - MCAA L - EDTA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Relinquished by: Relinquished by:			
Date/Time: 4-4-19 Date/Time: 0845 Date/Time:		Date/Time: 4-5-19 Date/Time: 900 Date/Time:	
Company: RCH Company:		Company: TAP Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:			



ORIGIN ID:BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 59.00 LB
CAD: 006993789/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 130297/0827/324/11595 12/19

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

(412) 963-7058
INV:

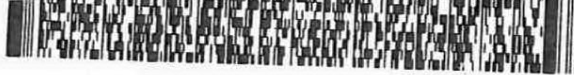
15238

Uncorrected temp
Thermometer ID

2.9 °C
10

CFT-10 Initials W

PT-WI-SR-001 effective 11/5/18



FedEx
Express



AN10J010610161F

04:05
4660

15:00

F-1 NEW

4 of 4
MPS# 7864 4788 4660
0263
Mstr# 7864 4788 4638

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

0201

~~XITPITA~~

15283
PA-US PIT

FedEx
TRK# 7864 4788 4660
0201

AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 626260 05APR19 PITA 653C1/D7E5/OC9A

Align Open End of FedEx Barcode Here

180-88629 Waybill



ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 70.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

BLN 5551707ES/2380 0263/2380/011996 12/18

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

15238

(412) 963-7068

REF:

4.0 °C

Uncorrected temp
Thermometer ID

10

CF H-O Initials JW

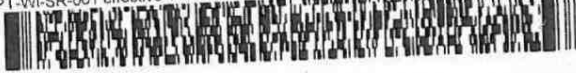


FedEx
Express



RT NEW 15:00
FZ 4650
04.05

PT-WI-SR-001 effective 11/8/18



3 of 4

MPS# 7864 4788 4650
0263

Mstr# 7864 4788 4638

0201

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

~~XII PITA~~

15283
PA-US PIT

FedEx

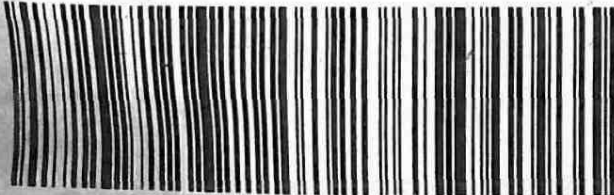
TRK# 7864 4788 4650
0201

STANDARD OVERNIGHT

AA

65 AGCA

15238
PA-US
PIT



FID 626268 05APR19 PITA 653C1/D7E5/UCBA

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- 13

ORIGIN: MILTON (850) 336-0192
RICK HEGEMORFER
RDH
5720 DOVE DR

SHIP DATE: 04/01/19
ACT WGT: 62.00 LB
CAL: 006993799/SSFE2002
DIM: 25x14x14 IN
BILL THIRD PARTY

MILTON, FL 32571
UNITED STATES US

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RET'L'NS
301 ALPHA DR

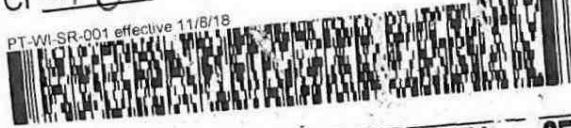
PITTSBURGH PA 15283

15238

Uncorrected temp 3.3 °C
Thermometer ID 10

CF HW Initials JN

PT-WI-SR-001 effective 11/8/18



FedEx
Express



FRI - 05 APR 3:00P
STANDARD OVERNIGHT

2 of 4
MP# 7864 4788 4649
0263

FedEx
TRK# 7864 4788 4649
0201

STANDARD OVERNIGHT

AA

65 AGCA

15238
PA-US
PIT

NEW 16:00 4649 04:05
FZ



FID 626268 06APR19 PITA 663C1/D7E6/0C8A

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- 13

ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 64.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN
BILL THIRD PARTY

PLD # 158257 AREZ/SALD/11595 12/13

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283 REF: **15238**
(412) 983-7068

Uncorrected temp 3.4 °C
Thermometer ID 10

CF H-O Initials TN

PT-WL-SR-001 effective 11/8/18



1 of 4 **FRI - 05 APR 3:00P**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

FedEx **FRI - 05 APR AA**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

65 AGCA **15238**
PA-US
PIT



FID 106442 05APR19 PITA 553C1/D7E5/0C8A

15:00
4
04

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- 11
- 12
- 13

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record



Environment Testing
TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab Pkt:	Carrier Tracking No(s):	COC No:
Shipping/Receiving:	Phone:	Bortol, Veronica		180-359680.1
Company:		E-Mail:	State of Origin:	Page:
TestAmerica Laboratories, Inc.		veronica.bortol@testamericainc.com	Georgia	Page 1 of 2
Address:	Due Date Requested:	Accreditations Required (See note):		Job #:
13715 Rider Trail North,	4/17/2019			180-88629-2
City:	TAT Requested (days):			
Earth City				
State, Zip:				
MO, 63045				
Phone:	PO #:			
314-298-8566(Tel) 314-298-8757(Fax)	MO #:			
Email:	Project #:			
	18020186			
Project Name:	SSOW#:			
CCR - Plant Watson				
Site:				

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Residue, S-salt, Over-salt, BT-Tissue, AA#)	Field Filtered Sample (Yes or No)			Analysis Requested			Total Number of containers	Special Instructions/Note:	
					Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Ra226Ra228_GFPC	A - HCL	M - Hexane			
SW-1 (180-88629-1)	4/3/19	02:27	Eastern	Water	X	X	X						
SW-2 (180-88629-2)	4/3/19	02:45	Eastern	Water	X	X	X						
SW-3 (180-88629-3)	4/3/19	01:20	Eastern	Water	X	X	X						
SW-4 (180-88629-4)	4/3/19	00:40	Eastern	Water	X	X	X						
SW-5 (180-88629-5)	4/2/19	23:01	Eastern	Water	X	X	X						
SW-6 (180-88629-6)	4/2/19	23:27	Eastern	Water	X	X	X						
SW-7 (180-88629-7)	4/2/19	23:50	Eastern	Water	X	X	X						
SW-8 (180-88629-8)	4/3/19	00:18	Eastern	Water	X	X	X						
DUP-01 (180-88629-9)	4/3/19	01:45	Eastern	Water	X	X	X						

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysts/instrument being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Time: _____

Relinquished by: *[Signature]* Date/Time: *4/16/19 1700* Company: *SMITH*

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

Received by: *Michael Sturm* Date/Time: *4-11-19 09:30* Company: *MSR*

Cooler Temperature(s) °C and Other Remarks: _____

Special Instructions/QC Requirements: _____

Method of Shipment: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Chain of Custody Record



Client Information (Sub Contract Lab)
 Client Contact: Shipping/Receiving
 Company: TestAmerica Laboratories, Inc.
 Address: 13715 Rider Trail North,
 City: Earth City
 State, Zip: MO, 63045
 Phone: 314-298-8566(Tel) 314-298-8757(Fax)
 Email:
 Project Name: CCR - Plant Watson
 Site:
 Sampler: Lab PM: Bortot, Veronica
 Phone: E-Mail: veronica.bortot@testamericainc.com
 Accreditations Required (See note):
 Due Date Requested: 4/17/2019
 TAT Requested (days):
 PO #:
 WO #:
 Project #: 18020186
 SSOW#:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil)	Preservation Code: (BT=Butter, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Ra226Ra228 GFPC	Total Number of Containers	Special Instructions/Note:
EB-01 (180-88629-10)	4/3/19	15:40 Eastern	Water	Water		X	X	X	X		2	
SW-3 (180-88629-11)	4/3/19	16:50 Eastern	Water	Water		X	X	X	X		2	
SW-4 (180-88629-12)	4/3/19	17:25 Eastern	Water	Water		X	X	X	X		2	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)
 Primary Deliverable Rank: 2

Empty Kit Relinquished by:
 Relinquished by: [Signature] Date/Time: 4/10/19 1700
 Relinquished by: [Signature] Date/Time: 4/10/19 1700
 Relinquished by: [Signature] Date/Time:
 Custody Seal No.:
 Yes No
 Cooler Temperature(s) °C and Other Remarks:

Received by: Michael Plum Date/Time: 4-11-19 09:30 Company: TA SA
Received by: [Signature] Date/Time: Company: Company



Chain of Custody Record



Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: CCR - Plant Watson Site:		Sampler: Lab PM: Bortot, Veronica Phone: E-Mail: veronica.bortot@testamericainc.com Accreditations Required (See note):		Carrier Tracking No(s): State of Origin: Georgia Page 1 of 1 Job #: 180-88629-4 Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Due Date Requested: 4/17/2019 TAT Requested (days):		Analysis Requested			
PO #: WO #: Project #: 18020186 SSOW#:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 9315_Ra226/PreSep_21 Standard Target List <input checked="" type="checkbox"/> 9320_Ra228/PreSep_0 Standard Target List <input checked="" type="checkbox"/> Ra226Ra228_GFPCC		Total Number of Containers: 2	
Sample Identification - Client ID (Lab ID) APMW-1R (180-88629-13)		Sample Date: 4/3/19	Sample Time: 15:00 Eastern	Sample Type (C=Comp, G=grab):	Matrix (W=Water, S=Soil, O=Swastick, On=Swastick, BT=Tissue, A=Air)
Preservation Code: Water		Special Instructions/Note:			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by:
 Relinquished by: Date: 4/10/19 17:00 Company: TestAmerica
 Relinquished by: Date/Time: Company:
 Relinquished by: Date/Time: Company:
 Custody Seals Intact: Custody Seal No.:
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months
 Special Instructions/QC Requirements:

Received by: Michael Hum Date/Time: 4-11-19 09:30 Company: TASA
 Received by: Date/Time: Company:
 Received by: Date/Time: Company:
 Method of Shipment: Time:
 Relinquished by: Date: Company:
 Relinquished by: Date/Time: Company:
 Relinquished by: Date/Time: Company:
 Custody Seals Intact: Custody Seal No.:
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):		COC No:
Client Contact:		Phone:	Bortot, Veronica	State of Origin:		180-359680.1
Shipping/Receiving		E-Mail:	veronica.bortot@testamericainc.com	Page 1 of 1		
Company:		Accreditations Required (See note):		Job #:		180-88629-6
Address:		Due Date Requested:		Preservation Codes:		
13715 Rider Trail North,		4/17/2019		A - HCl		M - Hexane
City:		TAT Requested (days):		B - NaOH		N - None
Earth City				C - Zn Acetate		O - AsNaO2
State, Zip:				D - Nitric Acid		P - Na2O4S
MO, 63045				E - NaHSO4		Q - Na2SO3
Phone:		PO #:		F - MeOH		R - Na2S2O3
314-298-8566(Tel) 314-298-8757(Fax)				G - Amchlor		S - H2SO4
Email:		WO #:		H - Ascorbic Acid		T - TSP Dodecahydrate
				I - Ice		U - Acetone
Project #:		Project #:		J - DI Water		V - MCAA
CCR - Plant Watson		18020186		K - EDTA		W - pH 4-5
Site:		SSOW#:		L - EDA		Z - other (specify)
				Other:		
				Total Number of containers		
				Field Filtered Sample (Yes or No)		
				Perform MS/MSD (Yes or No)		
				9315_Ra226/PrecSep_21 Standard Target List		
				9320_Ra228/PrecSep_0 Standard Target List		
				Ra226Ra228 GFPC		
				Preservation Code:		
				Sample Date		
				Sample Time		
				Sample Type (C=comp, G=grab)		
				Matrix (W=water, S=solid, O=waste/oil, BT=Titration, A=Air)		
				Sample Identification - Client ID (Lab ID)		
				PZ-1 (180-88629-14)		
				PZ-2 (180-88629-15)		
				DUP-01 (180-88629-16)		
				Special Instructions/Note:		

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: 4/10/19 1700 Company: JMS, Inc. Company: JMS, Inc.
Relinquished by: _____ Date: _____ Time: _____
Relinquished by: _____ Date: _____ Time: _____
Custody Seals Intact: _____ Custody Seal No.: _____
Δ Yes Δ No

Received by: Michael Plum Date/Time: 4-11-19 09:30 Company: JMS, Inc.
Received by: _____ Date/Time: _____ Company: _____
Received by: _____ Date/Time: _____ Company: _____
Cooler Temperature(s) °C and Other Remarks: _____

Special Instructions/QC Requirements:
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-4
SDG Number: Surface Water

Login Number: 88629

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-4
SDG Number: Surface Water

Login Number: 88629
List Number: 2
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 04/11/19 04:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88629-5

Laboratory Sample Delivery Group: Surface Water
Client Project/Site: CCR - Plant Watson

For:

Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
4/30/2019 9:33:16 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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results through
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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Job ID: 180-88629-5

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-88629-5**

Comments

No additional comments.

Receipt

The samples were received on 4/5/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.9° C, 3.3° C, 3.4° C and 4.0° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
 SDG: Surface Water

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88629-14	PZ-1	Water	04/03/19 12:40	04/05/19 09:00
180-88629-15	PZ-2	Water	04/03/19 13:50	04/05/19 09:00
180-88629-16	DUP-01	Water	04/03/19 11:40	04/05/19 09:00

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Client Sample ID: PZ-1

Lab Sample ID: 180-88629-14

Date Collected: 04/03/19 12:40

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			275438	04/11/19 11:10	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/16/19 16:10	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	436917	04/12/19 12:36	JAP	TAL PEN
Total/NA	Analysis	7470A		1			437226	04/15/19 14:20	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	275414	04/10/19 15:29	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			276425	04/03/19 12:40	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-88629-15

Date Collected: 04/03/19 13:50

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			275570	04/12/19 06:13	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/16/19 16:34	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	436917	04/12/19 12:36	JAP	TAL PEN
Total/NA	Analysis	7470A		1			437226	04/15/19 14:22	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	275414	04/10/19 15:29	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			276425	04/03/19 13:50	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-88629-16

Date Collected: 04/03/19 11:40

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			275438	04/11/19 10:54	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/16/19 16:38	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	436917	04/12/19 12:36	JAP	TAL PEN
Total/NA	Analysis	7470A		1			437226	04/15/19 15:18	JAP	TAL PEN
Instrument ID: HYDRA AA2										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Client Sample ID: DUP-01

Lab Sample ID: 180-88629-16

Date Collected: 04/03/19 11:40

Matrix: Water

Date Received: 04/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	275414	04/10/19 15:29	TAM	TAL PIT

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

CMR = Carl Reagle

FDS = Sampler Field

MJH = Matthew Hartman

TAM = Tessa Mastalski

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Client Sample ID: PZ-1

Lab Sample ID: 180-88629-14

Date Collected: 04/03/19 12:40

Matrix: Water

Date Received: 04/05/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.7		1.0	0.71	mg/L			04/11/19 11:10	1
Fluoride	<0.026		0.20	0.026	mg/L			04/11/19 11:10	1
Sulfate	1.1		1.0	0.38	mg/L			04/11/19 11:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 16:10	5
Boron	0.089		0.050	0.021	mg/L		04/12/19 14:05	04/16/19 16:10	5
Barium	0.085		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 16:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:10	5
Calcium	15		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 16:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 16:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 16:10	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 16:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 16:10	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 16:10	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 16:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 16:10	5
Lithium	0.0068		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 16:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		10	10	mg/L			04/10/19 15:29	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.45				SU			04/03/19 12:40	1

Client Sample ID: PZ-2

Lab Sample ID: 180-88629-15

Date Collected: 04/03/19 13:50

Matrix: Water

Date Received: 04/05/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			04/12/19 06:13	1
Fluoride	0.086	J	0.20	0.026	mg/L			04/12/19 06:13	1
Sulfate	1.9		1.0	0.38	mg/L			04/12/19 06:13	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0013		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 16:34	5
Boron	0.023	J	0.050	0.021	mg/L		04/12/19 14:05	04/16/19 16:34	5
Barium	0.075		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 16:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:34	5
Calcium	13		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 16:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:34	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Client Sample ID: PZ-2

Lab Sample ID: 180-88629-15

Date Collected: 04/03/19 13:50

Matrix: Water

Date Received: 04/05/19 09:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 16:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 16:34	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 16:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 16:34	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 16:34	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 16:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 16:34	5
Lithium	0.013		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 16:34	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 14:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		10	10	mg/L			04/10/19 15:29	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.19				SU			04/03/19 13:50	1

Client Sample ID: DUP-01

Lab Sample ID: 180-88629-16

Date Collected: 04/03/19 11:40

Matrix: Water

Date Received: 04/05/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.6		1.0	0.71	mg/L			04/11/19 10:54	1
Fluoride	<0.026		0.20	0.026	mg/L			04/11/19 10:54	1
Sulfate	1.3		1.0	0.38	mg/L			04/11/19 10:54	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 16:38	5
Boron	<0.021		0.050	0.021	mg/L		04/12/19 14:05	04/16/19 16:38	5
Barium	0.089		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 16:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:38	5
Calcium	15		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 16:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 16:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 16:38	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 16:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 16:38	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 16:38	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 16:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 16:38	5
Lithium	0.010		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 16:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 15:18	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Client Sample ID: DUP-01
Date Collected: 04/03/19 11:40
Date Received: 04/05/19 09:00

Lab Sample ID: 180-88629-16
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		10	10	mg/L			04/10/19 15:29	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275438/5
Matrix: Water
Analysis Batch: 275438

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/11/19 06:02	1
Fluoride	<0.026		0.20	0.026	mg/L			04/11/19 06:02	1
Sulfate	<0.38		1.0	0.38	mg/L			04/11/19 06:02	1

Lab Sample ID: LCS 180-275438/6
Matrix: Water
Analysis Batch: 275438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.6		mg/L		102	90 - 110
Fluoride	1.25	1.15		mg/L		92	90 - 110
Sulfate	25.0	25.1		mg/L		100	90 - 110

Lab Sample ID: MB 180-275570/6
Matrix: Water
Analysis Batch: 275570

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/12/19 05:43	1
Fluoride	<0.026		0.20	0.026	mg/L			04/12/19 05:43	1
Sulfate	<0.38		1.0	0.38	mg/L			04/12/19 05:43	1

Lab Sample ID: LCS 180-275570/5
Matrix: Water
Analysis Batch: 275570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.0		mg/L		104	90 - 110
Fluoride	1.25	1.29		mg/L		103	90 - 110
Sulfate	25.0	26.2		mg/L		105	90 - 110

Lab Sample ID: 180-88629-15 MS
Matrix: Water
Analysis Batch: 275570

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15		25.0	41.4		mg/L		106	80 - 120
Fluoride	0.086	J	1.25	1.36		mg/L		102	80 - 120
Sulfate	1.9		25.0	27.8		mg/L		104	80 - 120

Lab Sample ID: 180-88629-15 MSD
Matrix: Water
Analysis Batch: 275570

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15		25.0	41.4		mg/L		106	80 - 120	0	20
Fluoride	0.086	J	1.25	1.38		mg/L		103	80 - 120	1	20
Sulfate	1.9		25.0	28.2		mg/L		105	80 - 120	1	20

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436902/1-A ^5
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 14:35	5
Boron	<0.021		0.050	0.021	mg/L		04/12/19 14:05	04/16/19 14:35	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 14:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Calcium	<0.13		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 14:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 14:35	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 14:35	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 14:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5

Lab Sample ID: LCS 400-436902/2-A
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0506		mg/L		101	80 - 120
Boron	0.100	0.0984		mg/L		98	80 - 120
Barium	0.0500	0.0479		mg/L		96	80 - 120
Beryllium	0.0500	0.0479		mg/L		96	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Cobalt	0.0500	0.0519		mg/L		104	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Molybdenum	0.0500	0.0498		mg/L		100	80 - 120
Lead	0.0500	0.0485		mg/L		97	80 - 120
Antimony	0.0500	0.0478		mg/L		96	80 - 120
Selenium	0.0500	0.0575		mg/L		115	80 - 120
Thallium	0.0100	0.00929		mg/L		93	80 - 120
Lithium	0.0500	0.0482		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-436917/14-A
Matrix: Water
Analysis Batch: 437226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436917

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 13:29	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
 SDG: Surface Water

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 400-436917/15-A
 Matrix: Water
 Analysis Batch: 437226

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 436917
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000958		mg/L		95	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-275414/2
 Matrix: Water
 Analysis Batch: 275414

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/10/19 15:29	1

Lab Sample ID: LCS 180-275414/1
 Matrix: Water
 Analysis Batch: 275414

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	192		mg/L		96	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

HPLC/IC

Analysis Batch: 275438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	300.0	
180-88629-16	DUP-01	Total/NA	Water	300.0	
MB 180-275438/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275438/6	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 275570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-15	PZ-2	Total/NA	Water	300.0	
MB 180-275570/6	Method Blank	Total/NA	Water	300.0	
LCS 180-275570/5	Lab Control Sample	Total/NA	Water	300.0	
180-88629-15 MS	PZ-2	Total/NA	Water	300.0	
180-88629-15 MSD	PZ-2	Total/NA	Water	300.0	

Metals

Prep Batch: 436902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total Recoverable	Water	3005A	
180-88629-15	PZ-2	Total Recoverable	Water	3005A	
180-88629-16	DUP-01	Total Recoverable	Water	3005A	
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 436917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	7470A	
180-88629-15	PZ-2	Total/NA	Water	7470A	
180-88629-16	DUP-01	Total/NA	Water	7470A	
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 437226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	7470A	436917
180-88629-15	PZ-2	Total/NA	Water	7470A	436917
180-88629-16	DUP-01	Total/NA	Water	7470A	436917
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	436917
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	436917

Analysis Batch: 437398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total Recoverable	Water	6020	436902
180-88629-15	PZ-2	Total Recoverable	Water	6020	436902
180-88629-16	DUP-01	Total Recoverable	Water	6020	436902
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	6020	436902
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	6020	436902

General Chemistry

Analysis Batch: 275414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-5
SDG: Surface Water

General Chemistry (Continued)

Analysis Batch: 275414 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-15	PZ-2	Total/NA	Water	SM 2540C	
180-88629-16	DUP-01	Total/NA	Water	SM 2540C	
MB 180-275414/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-275414/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 276425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	Field Sampling	
180-88629-15	PZ-2	Total/NA	Water	Field Sampling	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site: Project #: 18020186 SSOW#:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): COC No: 180-50457-10589.1 Page: Page 1 of 1 Job #:					
Due Date Requested: TAT Requested (days): 3 DAY PO # 10382608 SCS-10382608 WO # 3 DAY AYSH		Analysis Requested 6020_7470A 2540C_Calcd_300_ORGM_28D 9315_Ra226_9320_Ra228 APPEX 3 APPEX 4					
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=oil, D=dust, L=leachate) Preservation Code:		Field Filled Sample (Yes or No) Total Number of Containers Special Instructions/Note: 180-88829-01 Chain of Custody					
SW-1	4-3-19	0227	G	Water	X		
SW-2	4-3-19	0245	G	Water	X		
SW-3	4-3-19	0120	G	Water	X		
SW-4	4-3-19	0040	G	Water	X		
SW-5	4-2-19	2301	G	Water	X		
SW-6	4-2-19	2327	G		X		
SW-7	4-2-19	2350	G		X		
SW-8	4-3-19	0018	G		X		
DWP-01	4-3-19	0145	G		X		
EB-01	4-3-19	1546	G		X		
SW-3	4-3-19	1650	G		X		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months					
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Method of Shipment:					
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Received by: Julie Watson Received by: [Signature] Received by:					
Date/Time: 4-4-19 0915 Date/Time:		Date/Time: 4-5-19 9:00 Date/Time:					
Company: [Signature] Company:		Company: JARIT Company:					
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:					

Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: [Redacted] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site: [Redacted]		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): [Redacted]		COC No: 180-50457-10589.1 Page: [Redacted] Page # of # [Redacted] Job #: [Redacted]	
Due Date Requested: [Redacted] TAT Requested (days): 3 Day Rush PO #: SCS10382606 WO #: [Redacted] Project #: 18020186 SSOW#: [Redacted]		Analysis Requested: [Redacted]			
Sample Identification: SW-4 Sample Date: 4-3-19 Sample Time: 1725 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=washoff, BT=Boots, A=Air): Water		Field Filtered Sample (Yes or No): [Redacted]			
Preservation Codes: A-HCL, B- NaOH, C-Zn Acetate, D-Nitric Acid, E-NaHSO4, F-MeOH, G-Amchlor, H-Ascorbic Acid, I-Ice, J-DI Water, K-EDTA, L-EDA, Other: [Redacted]		Preservation Codes: M-Hexane, N-None, O-AshNaO2, P-Na2OAS, Q-Na2SO3, R-Na2SO4, S-H2SO4, T-TSP Dodecahydrate, U-Acetone, V-MCAA, W-pH 4.5, Z-other (specify) [Redacted]			
Total Number of Containers: [Redacted]		Total Number of Containers: [Redacted]			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For [Redacted] Months		Special Instructions/QC Requirements: [Redacted]			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Method of Shipment: [Redacted]			
Deliverable Requested: I, II, III, IV, Other (specify) [Redacted]		Date: [Redacted]			
Empty Kit Relinquished by: [Redacted]		Date: [Redacted]			
Relinquished by: [Redacted]		Date/Time: 4-4-19 0815 Company: [Redacted]			
Relinquished by: [Redacted]		Date/Time: [Redacted]			
Relinquished by: [Redacted]		Date/Time: [Redacted]			
Custody Seals Intact: [Redacted]		Cooler Temperature(s) °C and Other Remarks: [Redacted]			



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-336-0192 Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s): 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382605 WO #:		Analysis Requested 6020, 7470A 2540C, Calcd, 300, ORGFM, 28D 9315, Ra226, 9320, Ra228 APX-3 APX-4 Field Filtered Sample (Yes or No)	
Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification APMW-1R Sample Date: 4/3/19 Sample Time: 1500 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=solid, O=oil, BT=Blood, A=Air): Water		Special Instructions/Note: 180-88629-03 Chain of Custody Barcode: [Barcode]	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For: Months	
Date: 4/4/19 0917 Date/Time:		Date/Time: 4-5-19 900 Date/Time:	
Company: APT Company:		Company: [Signature] Company:	
Date/Time:		Date/Time:	
Date/Time:		Date/Time:	
Date/Time:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:	



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERN.CO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): COC No: 180-50457-10589-1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382606 W/O #:		Analysis Requested 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGM_28D 6020_7470A Field Filtered Sample (Yes or No)	
Sample Identification PZ-1 PZ-2 Dup-01		Sample Date 4/3/19 4/3/19 4/3/19	
Sample Time 1240 1350 1140		Sample Type (C=Comp, G=grab) G G G	
Matrix (W=water, S=solid, O=washoil, RT=Resin, A=Air) Water Water Water Water Water		Preservation Code X X X X X	
Special Instructions/Note: 180-88629-04 Chain of Custody		Total Number of Containers:	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - MCAA L - EDTA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Relinquished by: Relinquished by:			
Date/Time: 4-4-19 Date/Time: 0815 Date/Time:		Date/Time: 4-5-19 Date/Time: 900 Date/Time:	
Company: Southern Company Company: Southern Company Company: Southern Company		Company: TAPCO Company: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:			



ORIGIN ID:BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 59.00 LB
CAD: 006993789/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 130297/082/524/11595 12/19

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

(412) 963-7058
INV:

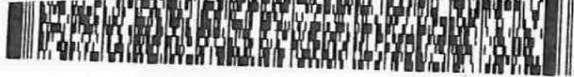
15238

Uncorrected temp
Thermometer ID

2.9 °C
10

CFT-10 Initials IN

PT-WI-SR-001 effective 11/5/18



FedEx
Express



AN10J010610161F

04:05
4660
15:00
NEW

4 of 4
MPS# 7864 4788 4660
0263
Mstr# 7864 4788 4638

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

0201

~~XITPITA~~

15283
PA-US PIT

FedEx
TRK# 7864 4788 4660
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AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 626260 05APR19 PITA 653C1/D7E5/OC9A

Align Open End of FedEx Barcode Here



180-88629 Waybill

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ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 70.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

BLN 5551707ES/2380 15238

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

(412) 863-7068

REF:

15238

Uncorrected temp
Thermometer ID

4.0 °C
10

CF H-O

Initials JW

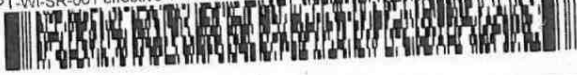


FedEx
Express



RT NEW 15:00
FZ 4650 04.05

PT-WI-SR-001 effective 11/8/18



3 of 4

MPS# 7864 4788 4650

Mstr# 7864 4788 4638

0201

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

~~XII PITA~~

15283
PA-US PIT

FedEx

TRK# 7864 4788 4650

0201

STANDARD OVERNIGHT

AA

65 AGCA

15238
PA-US
PIT



FID 626268 05APR19 PITA 663C1/D7E5/UCBA

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ORIGIN: MILTON (850) 336-0192
RICK HEGEMORFER
RDH
5720 DOVE DR

SHIP DATE: 04/01/19
ACT WGT: 62.00 LB
CAL: 006993799/SSFE2002
DIM: 25x14x14 IN
BILL THIRD PARTY

MILTON, FL 32571
UNITED STATES US

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RET'NS
301 ALPHA DR

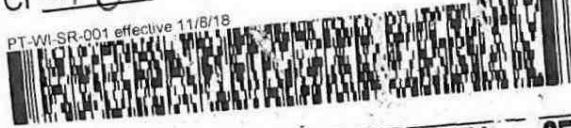
PITTSBURGH PA 15283

15238

Uncorrected temp 3.3 °C
Thermometer ID 10

CF HW Initials JN

PT-WI-SR-001 effective 11/8/18



FedEx
Express



FRI - 05 APR 3:00P
STANDARD OVERNIGHT

2 of 4
MP# 7864 4788 4649
0263

FedEx
TRK# 7864 4788 4649
0201

AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT

NEW 16:00 4649 04:05
FZ



FID 626268 06APR19 PITA 663C1/D7E6/0C8A

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ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 64.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN
BILL THIRD PARTY

PLD # 158257 AREZ/SALD/11595 12/13

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15238 REF: 15238
(412) 983-7068

Uncorrected temp 3.4 °C
Thermometer ID 10

CF H-O Initials TN

PT-WL-SR-001 effective 11/8/18



1 of 4 **FRI - 05 APR 3:00P**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

FedEx
TRK# 7864 4788 4638 **FRI - 05 APR AA**
0201 **STANDARD OVERNIGHT**

65 AGCA

15238
PA-US
PIT



FID 106442 05APR19 PITA 553C1/D7E5/0C8A

15:00
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04

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Chain of Custody Record



Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, Pensacola, FL 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Sampler: Bortot, Veronica Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Accreditations Required (See note):		COC No: 180-359679.1 Page: Page 1 of 2 Job #: 180-88629-1		Carrier Tracking No(s): State of Origin: Georgia	
Due Date Requested: 4/11/2019 TAT Requested (days):		Analysis Requested:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
PO #: _____ WO #: _____ Project #: 18020186 SSOV#: _____		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)		Total Number of Containers	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	
SW-1 (180-88629-1) SW-2 (180-88629-2) SW-3 (180-88629-3) SW-4 (180-88629-4) SW-5 (180-88629-5) SW-6 (180-88629-6) SW-7 (180-88629-7) SW-8 (180-88629-8) DUP-01 (180-88629-9)		4/3/19 4/3/19 4/3/19 4/3/19 4/2/19 4/2/19 4/2/19 4/3/19 4/3/19		Eastern Eastern Eastern Eastern Eastern Eastern Eastern Eastern		Water Water Water Water Water Water Water Water	
Sample Identification - Client ID (Lab ID)		Preservation Code:		Special Instructions/Note:		7470A/470A_Prep	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.		Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		Method of Shipment:	
Empty Kit Relinquished by:		Date:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		0.3 °C (FAC)	



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Bortot, Veronica		Carrier Tracking No(s):						
Client Contact: Shipping/Receiving		Phone: E-Mail: veronica.bortot@testamericainc.com		State of Origin: Georgia						
Company: TestAmerica Laboratories, Inc.		Address: 3355 McLemore Drive, Pensacola FL, 32514		COC No: 180-359679.2						
City: Pensacola		State: FL		Page: Page 2 of 2						
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		PO #: WO #:		Job #: 180-88629-1						
Email:		Project #: 18020186		Preservation Codes:						
Site: CCR - Plant Watson		SSOW#:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:						
Due Date Requested: 4/11/2019		TAT Requested (days):		Analysis Requested						
Sample Date		Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	620/3005A (MOD)	7470A/7470A_Prep	Total Number of containers	Special Instructions/Note:
EB-01 (180-88629-10)	4/3/19	15:40 Eastern	Water	Water	X	X	X	1		
SW-3 (180-88629-11)	4/3/19	16:50 Eastern	Water	Water	X	X	X	1		
SW-4 (180-88629-12)	4/3/19	17:25 Eastern	Water	Water	X	X	X	1		
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. 1</p>										
Possible Hazard Identification										
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:										
Empty Kit Relinquished by:										
Relinquished by: <i>[Signature]</i> Date: 4/10/19 1700 Relinquished by: <i>[Signature]</i> Date: _____ Relinquished by: _____ Date: _____										
Relinquished by: <i>[Signature]</i> Date: 4/11/19 8:44 Relinquished by: <i>[Signature]</i> Date: _____ Relinquished by: _____ Date: _____										
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: 0.3°C FR7										



Chain of Custody Record



Client Information (Sub Contract Lab) Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email: Project Name: CCR - Plant Watson Site:		Sampler: Lab PM: Bortol, Veronica Phone: E-Mail: veronica.bortol@testamericainc.com Shipping/Receiving: veronica.bortol@testamericainc.com Accreditations Required (See note):		Carrier Tracking No(s): State of Origin: Georgia Page: Page 1 of 1 Job #: 180-88629-5		COC No: 180-359679.1									
Due Date Requested: 4/11/2019 TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Total Number of Containers									
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
PZ-1 (180-88629-14)		4/3/19		12:40 Eastern		Water		Water		X		X		1	
PZ-2 (180-88629-15)		4/3/19		13:50 Eastern		Water		Water		X		X		1	
DUP-01 (180-88629-16)		4/3/19		11:40 Eastern		Water		Water		X		X		1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date:
 Relinquished by: Date/Time: 4/10/19 17:00 Company: Junita Company
 Relinquished by: Date/Time: Received by: Kaitlynn R. Away Date/Time: 4-11-19 8:44 Company: TA Company
 Relinquished by: Date/Time: Received by: Date/Time: Company: Company
 Custody Seals Intact: Δ Yes Δ No
 Custody Seal No.:
 Cooler Temperature(s) °C and Other Remarks: 0.3°C - JK7

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Method of Shipment: Date/Time: Received by: Kaitlynn R. Away Date/Time: 4-11-19 8:44 Company: TA Company

Vcr: 01/16/2019



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-5
SDG Number: Surface Water

Login Number: 88629

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-5
SDG Number: Surface Water

Login Number: 88629
List Number: 3
Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola
List Creation: 04/11/19 04:59 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88629-6

Laboratory Sample Delivery Group: Surface Water
Client Project/Site: CCR - Plant Watson

For:

Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
5/31/2019 5:50:33 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
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Case Narrative	3
Definitions/Glossary	4
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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Job ID: 180-88629-6

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88629-6

Comments

No additional comments.

Receipt

The samples were received on 4/5/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.9° C, 3.3° C, 3.4° C and 4.0° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-424949

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-1 (180-88629-14), PZ-2 (180-88629-15), DUP-01 (180-88629-16), (LCS 160-424949/1-A), (LCSD 160-424949/2-A) and (MB 160-424949/23-A)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-424953

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-1 (180-88629-14), PZ-2 (180-88629-15), DUP-01 (180-88629-16), (LCS 160-424953/1-A), (LCSD 160-424953/2-A) and (MB 160-424953/23-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-424953:

Insufficient sample volume was available to perform a sample duplicate for the following samples: PZ-1 (180-88629-14), PZ-2 (180-88629-15) and DUP-01 (180-88629-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-424949:

Insufficient sample volume was available to perform a sample duplicate for the following samples: PZ-1 (180-88629-14), PZ-2 (180-88629-15) and DUP-01 (180-88629-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19 *
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-88629-14	PZ-1	Water	04/03/19 12:40	04/05/19 09:00	
180-88629-15	PZ-2	Water	04/03/19 13:50	04/05/19 09:00	
180-88629-16	DUP-01	Water	04/03/19 11:40	04/05/19 09:00	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Client Sample ID: PZ-1

Date Collected: 04/03/19 12:40

Date Received: 04/05/19 09:00

Lab Sample ID: 180-88629-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.97 mL	1.0 g	424949	04/22/19 12:18	JLC	TAL SL
Total/NA	Analysis	9315		1			429043	05/18/19 21:59	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			999.97 mL	1.0 g	424953	04/22/19 12:52	JLC	TAL SL
Total/NA	Analysis	9320		1			427793	05/09/19 08:45	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429081	05/20/19 08:48	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Date Collected: 04/03/19 13:50

Date Received: 04/05/19 09:00

Lab Sample ID: 180-88629-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.09 mL	1.0 g	424949	04/22/19 12:18	JLC	TAL SL
Total/NA	Analysis	9315		1			429043	05/18/19 21:59	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.09 mL	1.0 g	424953	04/22/19 12:52	JLC	TAL SL
Total/NA	Analysis	9320		1			427793	05/09/19 08:45	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429081	05/20/19 08:48	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Date Collected: 04/03/19 11:40

Date Received: 04/05/19 09:00

Lab Sample ID: 180-88629-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.49 mL	1.0 g	424949	04/22/19 12:18	JLC	TAL SL
Total/NA	Analysis	9315		1			429045	05/18/19 21:51	CDR	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.49 mL	1.0 g	424953	04/22/19 12:52	JLC	TAL SL
Total/NA	Analysis	9320		1			427793	05/09/19 08:45	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429081	05/20/19 08:48	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

JLC = Jessica Chapman

Batch Type: Analysis

CDR = Conrad Reuscher

SMP = Siobhan Perry

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Client Sample ID: PZ-1

Lab Sample ID: 180-88629-14

Date Collected: 04/03/19 12:40

Matrix: Water

Date Received: 04/05/19 09:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.219		0.0940	0.0960	1.00	0.0928	pCi/L	04/22/19 12:18	05/18/19 21:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					04/22/19 12:18	05/18/19 21:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.206	0.208	1.00	0.317	pCi/L	04/22/19 12:52	05/09/19 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					04/22/19 12:52	05/09/19 08:45	1
Y Carrier	90.8		40 - 110					04/22/19 12:52	05/09/19 08:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.526		0.226	0.229	5.00	0.317	pCi/L		05/20/19 08:48	1

Client Sample ID: PZ-2

Lab Sample ID: 180-88629-15

Date Collected: 04/03/19 13:50

Matrix: Water

Date Received: 04/05/19 09:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.253		0.0922	0.0950	1.00	0.0799	pCi/L	04/22/19 12:18	05/18/19 21:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110					04/22/19 12:18	05/18/19 21:59	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.865		0.268	0.280	1.00	0.351	pCi/L	04/22/19 12:52	05/09/19 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110					04/22/19 12:52	05/09/19 08:45	1
Y Carrier	91.6		40 - 110					04/22/19 12:52	05/09/19 08:45	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Client Sample ID: PZ-2

Lab Sample ID: 180-88629-15

Date Collected: 04/03/19 13:50

Matrix: Water

Date Received: 04/05/19 09:00

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.283	0.296	5.00	0.351	pCi/L		05/20/19 08:48	1

Client Sample ID: DUP-01

Lab Sample ID: 180-88629-16

Date Collected: 04/03/19 11:40

Matrix: Water

Date Received: 04/05/19 09:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.180		0.0826	0.0842	1.00	0.0866	pCi/L	04/22/19 12:18	05/18/19 21:51	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	99.4		40 - 110					04/22/19 12:18	05/18/19 21:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.220	U	0.194	0.195	1.00	0.311	pCi/L	04/22/19 12:52	05/09/19 08:45	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	99.4		40 - 110					04/22/19 12:52	05/09/19 08:45	1
<i>Y Carrier</i>	95.3		40 - 110					04/22/19 12:52	05/09/19 08:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.400		0.211	0.212	5.00	0.311	pCi/L		05/20/19 08:48	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-424949/23-A
Matrix: Water
Analysis Batch: 429045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424949

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04549	U	0.0674	0.0675	1.00	0.115	pCi/L	04/22/19 12:18	05/18/19 21:52	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	109		40 - 110	04/22/19 12:18	05/18/19 21:52	1				

Lab Sample ID: LCS 160-424949/1-A
Matrix: Water
Analysis Batch: 429039

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424949

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.893		1.04	1.00	0.0943	pCi/L	87	75 - 125
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed				
Ba Carrier	101		40 - 110	04/22/19 12:18	05/18/19 21:52	1			

Lab Sample ID: LCSD 160-424949/2-A
Matrix: Water
Analysis Batch: 429039

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424949

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	9.274		0.972	1.00	0.0830	pCi/L	82	75 - 125	0.31	1
Carrier	LCSD LCSD		Limits			Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed						
Ba Carrier	103		40 - 110	04/22/19 12:18	05/09/19 08:49	1					

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-424953/23-A
Matrix: Water
Analysis Batch: 427793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424953

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3031	U	0.205	0.207	1.00	0.317	pCi/L	04/22/19 12:52	05/09/19 08:49	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	109		40 - 110	04/22/19 12:52	05/09/19 08:49	1				
Y Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Y Carrier	%Yield	Qualifier		Prepared	Analyzed					
Y Carrier	86.4		40 - 110	04/22/19 12:52	05/09/19 08:49	1				

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
 SDG: Surface Water

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-424953/1-A
Matrix: Water
Analysis Batch: 427795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.23	8.758		1.00	1.00	0.374	pCi/L	95	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	97.6		40 - 110

Lab Sample ID: LCSD 160-424953/2-A
Matrix: Water
Analysis Batch: 427795

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.23	9.013		1.02	1.00	0.345	pCi/L	98	75 - 125	0.13	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	92.3		40 - 110

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88629-6
SDG: Surface Water

Rad

Prep Batch: 424949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	PrecSep-21	
180-88629-15	PZ-2	Total/NA	Water	PrecSep-21	
180-88629-16	DUP-01	Total/NA	Water	PrecSep-21	
MB 160-424949/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-424949/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-424949/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 424953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88629-14	PZ-1	Total/NA	Water	PrecSep_0	
180-88629-15	PZ-2	Total/NA	Water	PrecSep_0	
180-88629-16	DUP-01	Total/NA	Water	PrecSep_0	
MB 160-424953/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-424953/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-424953/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site: Project #: 18020186 SSOW#:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): COC No: 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY PO # 10382608 SCS-10382608 WO # 6020, 7470A 2540C_Calcd, 300_ORGM_28D 9315_Ra226, 9320_Ra228 APPEX 3 APPEX 4		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - TSP M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 L - EDA Other:	
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=other) Preservation Code:		Field Filled Sample (Yes or No) Total Number of Containers Special Instructions/Note: 180-88829-01 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Received by: Julie Watson Received by: [Signature] Received by:	
Date/Time: 4-4-19 0915 Date/Time:		Date/Time: 4-5-19 9:00 Date/Time:	
Company: [Signature] Company:		Company: [Signature] Company:	
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: [Redacted] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson - Surface water Site: [Redacted]		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): [Redacted]	
Due Date Requested: [Redacted] TAT Requested (days): 3 Day Rush PO #: SCS10382606 WO #: [Redacted] Project #: 18020186 SSOW#: [Redacted]		Analysis Requested: [Redacted]	
Sample Identification: SW-4 Sample Date: 4-3-19 Sample Time: 1725 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=washoff, BT=boots, A=air): Water		Field Filtered Sample (Yes or No): [Redacted]	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: [Redacted]		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCAAA W - pH 4.5 X - other (specify)	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Total Number of containers: [Redacted]	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/QC Requirements: [Redacted]	
Empty Kit Relinquished by: [Redacted]		Method of Shipment: [Redacted]	
Relinquished by: [Redacted]		Date/Time: 4-4-19 0815	
Relinquished by: [Redacted]		Date/Time: 4-5-19 9:00	
Relinquished by: [Redacted]		Date/Time: [Redacted]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: [Redacted]	



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: 205-336-0192 Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s): 180-50457-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382605 WO #:		Analysis Requested 6020, 7470A 2540C, Calcd, 300, ORGFM, 28D 9315, Ra226, 9320, Ra228 APX-3 APX-4 Field Filtered Sample (Yes or No)	
Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification APMW-1R Sample Date: 4/3/19 Sample Time: 1500 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=solid, O=oil, BT=Blood, A=Air): Water		Special Instructions/Note: 180-88629-03 Chain of Custody Barcode	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 4-4-19 0917 Company: APH EM		Received by: [Signature] Date/Time: 4-5-19 900 Company: [Signature]	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERN.CO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): COC No: 180-50457-10589-1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382606 W/O #:		Analysis Requested 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGM_28D 6020_7470A Field Filtered Sample (Yes or No)	
Sample Identification PZ-1 PZ-2 Dup-01		Sample Date 4/3/19 4/3/19 4/3/19	
Sample Time 1240 1350 1140		Sample Type (C=Comp, G=grab) G G G	
Matrix (W=water, S=solid, O=washoil, RT=Residue, A=Air) Water Water Water Water Water		Preservation Code X X X X X	
Total number of containers		Special Instructions/Note: 180-88629-04 Chain of Custody	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - MCAA L - EDTA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Relinquished by: Relinquished by:			
Date/Time: 4-4-19 Date/Time: 0845 Date/Time:		Date/Time: 4-5-19 Date/Time: 900 Date/Time:	
Company: Southern Company Company: Southern Company Company: Southern Company		Company: TAPAC Company: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:			

ORIGIN ID:BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 59.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 130297/0827/324/11595 12/19

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

(412) 963-7058
INV:

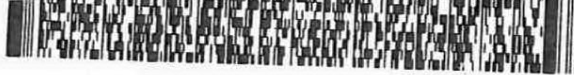
15238

Uncorrected temp
Thermometer ID

2.9 °C
10

CFT H-O Initials IN

PT-WI-SR-001 effective 11/5/18



FedEx
Express



AN10J010610161F

04:05
4660

15:00

NEW

4 of 4
MPS# 7864 4788 4660
0263
Mstr# 7864 4788 4638

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

0201

~~XITPITA~~

15283
PA-US PIT

FedEx
TRK# 7864 4788 4660
0201

AA
STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT



FID 626260 05APR19 PITA 653C1/D7E5/OC9A

Align Open End of FedEx Barcode Here

180-88629 Waybill



ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR

MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 70.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 1502087 0862/2300/03/07/1596 12/18

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15283

15238

(412) 863-7068

REF:

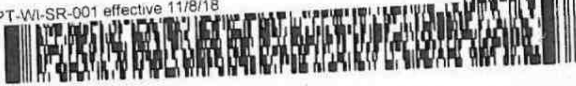
4.0 °C

Uncorrected temp
Thermometer ID

10

CF H-O Initials JW

PT-WI-SR-001 effective 11/8/18



FedEx
Express



RT NEW 15:00
FZ 4650
04.05

3 of 4

MPS# 7864 4788 4650

Mstr# 7864 4788 4638

0201

FRI - 05 APR 3:00P
STANDARD OVERNIGHT

~~XII PITA~~

15283
PA-US PIT

FedEx

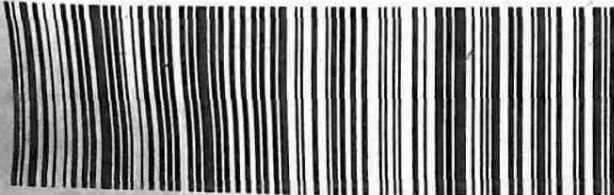
TRK# 7864 4788 4650

STANDARD OVERNIGHT

AA

65 AGCA

15238
PA-US
PIT



FID 626268 05APR19 PITA 663C1/D7E5/UCBA

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ORIGIN: MILTON (850) 336-0192
RICK HEGEMORFER
RDH
5720 DOVE DR

SHIP DATE: 04/01/19
ACT WGT: 62.00 LB
CAL: 006993799/SSFE2002
DIM: 25x14x14 IN
BILL THIRD PARTY

MILTON, FL 32571
UNITED STATES US

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RET'NS
301 ALPHA DR

PITTSBURGH PA 15283

Uncorrected temp
Thermometer ID

3.3 °C
10

CF HW Initials JN

PT-WI-SR-001 effective 11/8/18



FedEx
Express



FRI - 05 APR 3:00P
STANDARD OVERNIGHT

2 of 4
MP# 7864 4788 4649
0263

FedEx
TRK# 7864 4788 4649
0201

STANDARD OVERNIGHT

65 AGCA

15238
PA-US
PIT

NEW 16:00 4649 04:05
RT FZ



FID 626268 06APR19 PITA 663C1/D7E6/0C8A

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ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DR
MILTON, FL 32571
UNITED STATES US

SHIP DATE: 04APR19
ACTWGT: 64.00 LB
CAD: 006993799/SSFE2002
DIMS: 25x14x14 IN
BILL THIRD PARTY

PLD # 158257 AREZ/SALD/11595 12/13

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH - RETURNS
301 ALPHA DR

PITTSBURGH PA 15238 REF: **15238**
(412) 983-7068

Uncorrected temp 3.4 °C
Thermometer ID 10

CF H-O Initials TN

PT-WL-SR-001 effective 11/8/18



1 of 4 **FRI - 05 APR 3:00P**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

FedEx **FRI - 05 APR AA**
TRK# 7864 4788 4638 **STANDARD OVERNIGHT**
0201

65 AGCA **15238**
PA-US
PIT



FID 106442 05APR19 PITA 553C1/D7E5/0C8A

15:00
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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468


Chain of Custody Record



Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab P/N:	Carrier Tracking No(s):	COC No:							
Shipping/Receiving		Phone:	Bortol, Veronica		180-359680.1							
Company:		E-Mail:	veronica.bortol@testamericainc.com	State of Origin:	Georgia							
TestAmerica Laboratories, Inc.		Accelerations Required (See note):										
Address:		Due Date Requested:	Analysis Requested									
13715 Rider Trail North,		4/17/2019										
City:		TAT Requested (days):										
Earth City												
State, Zip:												
MO, 63045												
Phone:		PO #:										
314-298-8566(Tel) 314-298-8757(Fax)		WO #:										
Email:		Project #:										
		18020186										
Project Name:		SSOW#:										
CCR - Plant Watson												
Site:												
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Residue, S-Solid, Organic, A-Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
SW-1 (180-88629-1)	4/3/19	02:27	Eastern	Water		X	X	X	X	2		
SW-2 (180-88629-2)	4/3/19	02:45	Eastern	Water		X	X	X	X	2		
SW-3 (180-88629-3)	4/3/19	01:20	Eastern	Water		X	X	X	X	2		
SW-4 (180-88629-4)	4/3/19	00:40	Eastern	Water		X	X	X	X	2		
SW-5 (180-88629-5)	4/2/19	23:01	Eastern	Water		X	X	X	X	2		
SW-6 (180-88629-6)	4/2/19	23:27	Eastern	Water		X	X	X	X	2		
SW-7 (180-88629-7)	4/2/19	23:50	Eastern	Water		X	X	X	X	2		
SW-8 (180-88629-8)	4/3/19	00:18	Eastern	Water		X	X	X	X	2		
DUP-01 (180-88629-9)	4/3/19	01:45	Eastern	Water		X	X	X	X	2		
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysts/instrument being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>												
Possible Hazard Identification												
Unconfirmed												
Deliverable Requested: I, II, III, IV, Other (specify)												
Primary Deliverable Rank: 2												
Special Instructions/QC Requirements:												
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months <input type="checkbox"/> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)												
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____												
Relinquished by: _____		Date/Time: 4/16/19	1700	Company: JSMITH	Received by: Michael Sturm	Date/Time: 4-11-19	05:30	Company: JBSIR				
Relinquished by: _____		Date/Time: _____		Company: _____	Received by: _____	Date/Time: _____		Company: _____				
Relinquished by: _____		Date/Time: _____		Company: _____	Received by: _____	Date/Time: _____		Company: _____				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:								

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:	
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica		180-359680.2	
Company: TestAmerica Laboratories, Inc.		E-Mail:	veronica.bortot@testamericainc.com	Slate of Origin:	Page 2 of 2	
Address: 13715 Rider Trail North,		Accreditations Required (See note):		Job #:	180-88629-2	
City:	Earth City	Due Date Requested:	Analysis Requested:			
State, Zip:	MO, 63045	TAT Requested (days):	9315_Ra26/PrecSep_21 Standard Target List			
Phone:	314-298-8566(Tel) 314-298-8757(Fax)	PO #:	9320_Ra28/PrecSep_0 Standard Target List			
Email:		WO #:	Ra226Ra228 GFPC			
Project Name:	CCR - Plant Watson	Project #:	Perform MS/MSD (Yes or No)			
Site:		SSOW#:	Field Filtered Sample (Yes or No)			
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:
EB-01 (180-88629-10)		4/3/19	15:40 Eastern	Water	Water	X
SW-3 (180-88629-11)		4/3/19	16:50 Eastern	Water	Water	X
SW-4 (180-88629-12)		4/3/19	17:25 Eastern	Water	Water	X
						
Special Instructions/Note:						
Total Number of containers						
Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:						
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody.						
Possible Hazard Identification						
Unconfirmed						
Deliverable Requested: I, II, III, IV, Other (specify)						
Primary Deliverable Rank: 2						
Empty Kit Relinquished by:						
Date/Time: 4/10/19 1700						
Relinquished by: [Signature]						
Date/Time: 4/10/19 09:30						
Relinquished by: Michael Hum						
Date/Time: 4/10/19 09:30						
Relinquished by: [Signature]						
Date/Time: [Blank]						
Custody Seals Intact: Custody Seal No.:						
Δ Yes Δ No						
Cooler Temperature(s) °C and Other Remarks:						



Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
 Pittsburgh, PA 15238
 Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record



Environment Testing
 TestAmerica



Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: CCR - Plant Watson Site:		Sampler: Lab PM: Bortol, Veronica Phone: E-Mail: veronica.bortol@testamericainc.com Accreditations Required (See note):		Carrier Tracking No(s): COC No: 180-359680.1 Page: Page 1 of 1 Job #: 180-88629-4	
Due Date Requested: 4/17/2019 TAT Requested (days):		Analysis Requested			
PO #: WO #: Project #: SSOW#:		Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)		Total Number of Containers	
Sample Identification - Client ID (Lab ID) APMW-1R (180-88629-13)		Sample Date 4/3/19	Sample Time 15:00 Eastern	Sample Type (C=Comp, G=grab) G=grab	Matrix (W=Water, S=Soil, O=Water/Soil, B=BI-Tissue, A=Air) Water
Preservation Code: Water		9315_Ra226/PreSep_21 Standard Target List 9320_Ra228/PreSep_0 Standard Target List Ra226Ra228_GFP	X X X	X X X	Special Instructions/Note: Other:
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.					
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months					
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date/Time: 4/10/19 17:02 Company: TestAmerica Relinquished by: _____ Date/Time: _____ Company: Relinquished by: _____ Date/Time: _____ Company:					
Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks:					

Ver: 01/16/2019

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Chain of Custody Record



Client Information (Sub Contract Lab)			Sampler: Lab PM: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-359680.1				
Client Contact: Shipping/Receiving			Phone: E-Mail: veronica.bortot@testamericainc.com		State of Origin: Georgia		Page: Page 1 of 1				
Company: TestAmerica Laboratories, Inc.			Accreditations Required (See note):		Job #:		180-88629-6				
Address: 13715 Rider Trail North,			Due Date Requested: 4/17/2019		Analysis Requested		Preservation Codes:				
City: Earth City			TAT Requested (days):				M - Hexane N - None O - AsNaO2 P - Na2O4S D - Nitric Acid E - NaHSO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:				
State, Zip: MO, 63045			PO #:								
Phone: 314-298-8566(Tel) 314-298-8757(Fax)			WO #:								
Email:			Project #:								
Project Name: CCR - Plant Watson			18020186								
Site:			SSOW#:								
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Titration, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Ra226Ra228 GFPC	Total Number of Containers	Special Instructions/Note:
PZ-1 (180-88629-14)	4/3/19	12:40 Eastern	Water	Water	X	X	X	X	X	1	
PZ-2 (180-88629-15)	4/3/19	13:50 Eastern	Water	Water	X	X	X	X	X	1	
DUP-01 (180-88629-16)	4/3/19	11:40 Eastern	Water	Water	X	X	X	X	X	1	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:											
Date: _____ Time: _____ Method of Shipment: _____											
Relinquished by: _____ Company: _____											
Date/Time: 4/10/19 1700 Company: TestAmerica											
Relinquished by: _____ Company: _____											
Date/Time: _____ Company: _____											
Relinquished by: _____ Company: _____											
Date/Time: _____ Company: _____											
Custody Seals Intact: _____											
Custody Seal No.: _____											
Cooler Temperature(s) °C and Other Remarks:											

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-6
SDG Number: Surface Water

Login Number: 88629

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88629-6
SDG Number: Surface Water

Login Number: 88629
List Number: 2
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 04/11/19 04:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88672-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
4/30/2019 10:46:57 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Job ID: 180-88672-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-88672-1

Comments

No additional comments.

Receipt

The samples were received on 4/8/2019 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2° C and 3.2° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020,: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-3 (180-88672-1) and PZ-4 (180-88672-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19 *
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88672-1	PZ-3	Water	04/05/19 12:35	04/08/19 15:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-88672-1

Date Collected: 04/05/19 12:35

Matrix: Water

Date Received: 04/08/19 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			275293	04/10/19 12:16	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Analysis	300.0		100			275293	04/10/19 12:32	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			437398	04/16/19 16:42	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	436902	04/12/19 14:05	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100			437398	04/16/19 17:06	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	436917	04/12/19 12:36	JAP	TAL PEN
Total/NA	Analysis	7470A		1			437226	04/15/19 15:20	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	275625	04/12/19 12:01	TAM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			276425	04/05/19 12:35	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

FDS = Sampler Field

MJH = Matthew Hartman

TAM = Tessa Mastalski

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-88672-1

Date Collected: 04/05/19 12:35

Matrix: Water

Date Received: 04/08/19 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4000		100	71	mg/L			04/10/19 12:32	100
Fluoride	<0.26		2.0	0.26	mg/L			04/10/19 12:16	10
Sulfate	800		10	3.8	mg/L			04/10/19 12:16	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 16:42	5
Barium	0.071		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 16:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 16:42	5
Cobalt	0.0049		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 16:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 16:42	5
Molybdenum	0.41		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 16:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 16:42	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 16:42	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 16:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 16:42	5
Lithium	0.051		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 16:42	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.9		1.0	0.42	mg/L		04/12/19 14:05	04/16/19 17:06	100
Calcium	440		5.0	2.5	mg/L		04/12/19 14:05	04/16/19 17:06	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7800		100	100	mg/L			04/12/19 12:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.12				SU			04/05/19 12:35	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-275293/5
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/10/19 05:49	1
Fluoride	<0.026		0.20	0.026	mg/L			04/10/19 05:49	1
Sulfate	<0.38		1.0	0.38	mg/L			04/10/19 05:49	1

Lab Sample ID: LCS 180-275293/6
Matrix: Water
Analysis Batch: 275293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Fluoride	2.50	2.40		mg/L		96	90 - 110
Sulfate	50.0	49.5		mg/L		99	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-436902/1-A ^5
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/12/19 14:05	04/16/19 14:35	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/12/19 14:05	04/16/19 14:35	5
Boron	<0.021		0.050	0.021	mg/L		04/12/19 14:05	04/16/19 14:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Calcium	<0.13		0.25	0.13	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/12/19 14:05	04/16/19 14:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/12/19 14:05	04/16/19 14:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/12/19 14:05	04/16/19 14:35	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/12/19 14:05	04/16/19 14:35	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/12/19 14:05	04/16/19 14:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/12/19 14:05	04/16/19 14:35	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/12/19 14:05	04/16/19 14:35	5

Lab Sample ID: LCS 400-436902/2-A
Matrix: Water
Analysis Batch: 437398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 436902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0506		mg/L		101	80 - 120
Barium	0.0500	0.0479		mg/L		96	80 - 120
Boron	0.100	0.0984		mg/L		98	80 - 120
Beryllium	0.0500	0.0479		mg/L		96	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Cobalt	0.0500	0.0519		mg/L		104	80 - 120
Chromium	0.0500	0.0498		mg/L		100	80 - 120
Molybdenum	0.0500	0.0498		mg/L		100	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
 SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-436902/2-A
 Matrix: Water
 Analysis Batch: 437398

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 436902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	0.0500	0.0485		mg/L		97	80 - 120
Antimony	0.0500	0.0478		mg/L		96	80 - 120
Selenium	0.0500	0.0575		mg/L		115	80 - 120
Thallium	0.0100	0.00929		mg/L		93	80 - 120
Lithium	0.0500	0.0482		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-436917/14-A
 Matrix: Water
 Analysis Batch: 437226

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 436917

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/12/19 12:36	04/15/19 13:29	1

Lab Sample ID: LCS 400-436917/15-A
 Matrix: Water
 Analysis Batch: 437226

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 436917

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000958		mg/L		95	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-1
SDG: 1

HPLC/IC

Analysis Batch: 275293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	300.0	
180-88672-1	PZ-3	Total/NA	Water	300.0	
MB 180-275293/5	Method Blank	Total/NA	Water	300.0	
LCS 180-275293/6	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 436902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1 - DL	PZ-3	Total Recoverable	Water	3005A	
180-88672-1	PZ-3	Total Recoverable	Water	3005A	
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 436917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	7470A	
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 437226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	7470A	436917
MB 400-436917/14-A	Method Blank	Total/NA	Water	7470A	436917
LCS 400-436917/15-A	Lab Control Sample	Total/NA	Water	7470A	436917

Analysis Batch: 437398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total Recoverable	Water	6020	436902
180-88672-1 - DL	PZ-3	Total Recoverable	Water	6020	436902
MB 400-436902/1-A ^5	Method Blank	Total Recoverable	Water	6020	436902
LCS 400-436902/2-A	Lab Control Sample	Total Recoverable	Water	6020	436902

General Chemistry

Analysis Batch: 275625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 276425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	Field Sampling	

Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: Philip Evans 850-336-0193		COC No: 180-50457-10589-1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382606 WO #:		Carrier Tracking No(s):		Analysis Requested:	
Sample Identification: PZ-3 PZ-4 EB-01 FB-02		Field Filtered Sample (Yes or No): 6020_7470A 2540C_Calcd, 300_ORGF_M_28D 9315_Ra226, 9320_Ra228		Total Number of Containers:	
Sample Date: 4/5/19 Sample Time: 1035 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=soil, BT=soil, ANAL): Water		Preservation Code:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - Nitric Acid F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Date: 4/5/19 Sample Time: 1015 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=soil, BT=soil, ANAL): Water		Preservation Code:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Date: 4/5/19 Sample Time: 1018 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=soil, BT=soil, ANAL): Water		Preservation Code:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Date: 4/5/19 Sample Time: 1038 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=soil, BT=soil, ANAL): Water		Preservation Code:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Vial Relinquished by:		Date: 4/5/19 1330 Company: RPH		Method of Shipment:	
Relinquished by:		Date/Time:		Date/Time: 15004/18/19 Company:	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Align FedEx Pouch Here



SDR



ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR19
ACTWGT: 52.80 LB
CAD: 006993800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

0 **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

15238

Handwritten notes and signatures

(412) 983-7068
INV:
PO:

REF:
DEPT:

151967 REV 7/08 RRD



FedEx Express



J191010010701W

SDR

FedEx Saturday Delivery

1 of 2
TRK# 7864 7555 6581
0201
MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

FedEx
TRK# 7864 7555 6581
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

Melted Pel

15238
PA-US
PIT



Uncorrected temp
Thermometer ID

11.2
10
ND

CF 0 Initials

PT-WI-SR-001 effective 11/8/18

FID 106442 08APR19 PITA 55301/U/L5/BLCA

SDR

SDR



RT **NEW** 12:01
FZ

FedEx Saturday Delivery

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Do Not Lift Using This Tag

FedEx Express

SDR

151967 REV 7/08 RRD

FedEx Saturday Delivery

ORIGIN ID: 81XA (850) 336-0182
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR19
ACTWTG: 63.00 LB
CAD: 006983800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

0 SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

(412) 883-7058

15238
[Handwritten Signature]

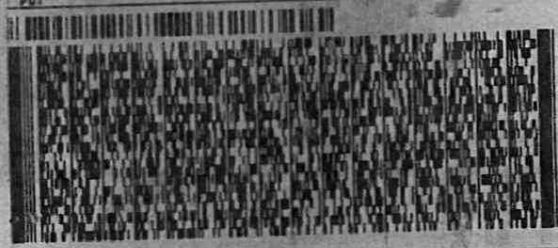
151967 REV 7/08 RRD

FedEx Saturday Delivery

FedEx Express

SDR

151967 REV 7/08 RRD



FedEx Express
E
AN10/01/00 118187

2 of 2

MPS# 7864 7555 6592
0263
Matr# 7864 7555 6581

SATURDAY 12:00P
PRIORITY OVERNIGHT

2 of 2

FedEx
MPS# 7864 7555 6592
0263

TUE - 09 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
PA-US
PIT



FTD 106442 08APR19 #ITA 553C1/D7E5/0C8A

Uncorrected temp
Thermometer ID

132 °C
to

CF *[Signature]*

Initials

NO

Delivery

151967 REV 7/08 RRD

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Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Bortot, Veronica		Carrier Tracking No(s): 180-359679.1					
Client Contact: Shipping/Receiving		Phone: veronica.bortot@testamericainc.com		Page: Page 1 of 1					
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-88672-1					
Address: 3355 McLemore Drive, Pensacola, FL, 32514		Due Date Requested: 4/11/2019		Preservation Codes:					
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		TAT Requested (days):		A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
Email:		PO #:		M - Hexane N - None O - AsNaO2 P - Na2SO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Project Name: CCR - Plant Watson		WO #:		Total Number of containers					
Site:		Project #: 18020186		Special Instructions/Note:					
		SSOW#:							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7470A/470A_Prep	6020/3005A App III & IV	Analysis Requested
PZ-3 (180-88672-1)	4/5/19	12:35 Eastern		Water	X	X			
PZ-4 (180-88672-2)	4/5/19	10:15 Eastern		Water	X	X			
EB-01 (180-88672-3)	4/5/19	10:18 Eastern		Water	X	X			
FB-02 (180-88672-4)	4/5/19	12:38 Eastern		Water	X	X			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: Method of Shipment: Months
 Relinquished by: Date/Time: Company: Received by: Date/Time: Company: 844
 Relinquished by: Date/Time: Company: Received by: Date/Time: Company: 0.3°C - FC



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88672-1

SDG Number: 1

Login Number: 88672

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88672-1

SDG Number: 1

Login Number: 88672

List Number: 3

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/11/19 04:44 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3°C IR 7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-88672-3
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
7/31/2019 4:45:51 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Job ID: 180-88672-3

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-88672-3

Comments

No additional comments.

Receipt

The samples were received on 4/8/2019 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2° C and 3.2° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-424880

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-3 (180-88672-1), PZ-4 (180-88672-2), EB-01 (180-88672-3), FB-02 (180-88672-4), (LCS 160-424880/1-A), (LCSD 160-424880/2-A) and (MB 160-424880/12-A)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-424881

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-3 (180-88672-1), PZ-4 (180-88672-2), EB-01 (180-88672-3), FB-02 (180-88672-4), (LCS 160-424881/1-A), (LCSD 160-424881/2-A) and (MB 160-424881/12-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-424881:

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-3 (180-88672-1), PZ-4 (180-88672-2), EB-01 (180-88672-3) and FB-02 (180-88672-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-424880:

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: PZ-3 (180-88672-1), PZ-4 (180-88672-2), EB-01 (180-88672-3) and FB-02 (180-88672-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	06-04-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
 SDG: 1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Hawaii	State Program	9	NA	06-30-19 *
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Michigan	State Program	5	9005	06-30-19 *
Missouri	State Program	7	780	06-30-20
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-20
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-20
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-88672-1	PZ-3	Water	04/05/19 12:35	04/08/19 15:00	
180-88672-3	EB-01	Water	04/05/19 10:18	04/08/19 15:00	
180-88672-4	FB-02	Water	04/05/19 12:38	04/08/19 15:00	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-88672-1

Date Collected: 04/05/19 12:35

Matrix: Water

Date Received: 04/08/19 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.53 mL	1.0 g	424880	04/21/19 09:09	CLP	TAL SL
Total/NA	Analysis	9315		1			428153	05/14/19 19:48	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			999.53 mL	1.0 g	424881	04/21/19 09:23	CLP	TAL SL
Total/NA	Analysis	9320		1			427695	05/08/19 15:57	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428457	05/15/19 08:57	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Lab Sample ID: 180-88672-3

Date Collected: 04/05/19 10:18

Matrix: Water

Date Received: 04/08/19 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.91 mL	1.0 g	424880	04/21/19 09:09	CLP	TAL SL
Total/NA	Analysis	9315		1			428140	05/14/19 19:47	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			999.91 mL	1.0 g	424881	04/21/19 09:23	CLP	TAL SL
Total/NA	Analysis	9320		1			427695	05/08/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428457	05/15/19 08:57	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: FB-02

Lab Sample ID: 180-88672-4

Date Collected: 04/05/19 12:38

Matrix: Water

Date Received: 04/08/19 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.67 mL	1.0 g	424880	04/21/19 09:09	CLP	TAL SL
Total/NA	Analysis	9315		1			428140	05/14/19 21:25	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.67 mL	1.0 g	424881	04/21/19 09:23	CLP	TAL SL
Total/NA	Analysis	9320		1			427695	05/08/19 15:58	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Analysis	Ra226_Ra228		1			428457	05/15/19 08:57	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Analyst References:

Lab: TAL SL

Batch Type: Prep

CLP = Cassandra Park

Batch Type: Analysis

CDR = Conrad Reuscher

KLS = Kody Saulters

SMP = Siobhan Perry

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-88672-1

Date Collected: 04/05/19 12:35

Matrix: Water

Date Received: 04/08/19 15:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.415		0.122	0.127	1.00	0.0892	pCi/L	04/21/19 09:09	05/14/19 19:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					04/21/19 09:09	05/14/19 19:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.44		0.398	0.457	1.00	0.394	pCi/L	04/21/19 09:23	05/08/19 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					04/21/19 09:23	05/08/19 15:57	1
Y Carrier	84.1		40 - 110					04/21/19 09:23	05/08/19 15:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.85		0.416	0.474	5.00	0.394	pCi/L		05/15/19 08:57	1

Client Sample ID: EB-01

Lab Sample ID: 180-88672-3

Date Collected: 04/05/19 10:18

Matrix: Water

Date Received: 04/08/19 15:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0720	U	0.0688	0.0691	1.00	0.103	pCi/L	04/21/19 09:09	05/14/19 19:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/21/19 09:09	05/14/19 19:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.158	U	0.221	0.222	1.00	0.370	pCi/L	04/21/19 09:23	05/08/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/21/19 09:23	05/08/19 15:58	1
Y Carrier	87.5		40 - 110					04/21/19 09:23	05/08/19 15:58	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Client Sample ID: EB-01

Lab Sample ID: 180-88672-3

Date Collected: 04/05/19 10:18

Matrix: Water

Date Received: 04/08/19 15:00

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.230	U	0.231	0.233	5.00	0.370	pCi/L		05/15/19 08:57	1

Client Sample ID: FB-02

Lab Sample ID: 180-88672-4

Date Collected: 04/05/19 12:38

Matrix: Water

Date Received: 04/08/19 15:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00296	U	0.0490	0.0490	1.00	0.101	pCi/L	04/21/19 09:09	05/14/19 21:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					04/21/19 09:09	05/14/19 21:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00670	U	0.200	0.200	1.00	0.362	pCi/L	04/21/19 09:23	05/08/19 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					04/21/19 09:23	05/08/19 15:58	1
Y Carrier	80.4		40 - 110					04/21/19 09:23	05/08/19 15:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00966	U	0.206	0.206	5.00	0.362	pCi/L		05/15/19 08:57	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-424880/12-A
Matrix: Water
Analysis Batch: 428140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424880

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04086	U	0.0515	0.0516	1.00	0.0845	pCi/L	04/21/19 09:09	05/14/19 21:25	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/21/19 09:09	05/14/19 21:25	1
	107									

Lab Sample ID: LCS 160-424880/1-A
Matrix: Water
Analysis Batch: 428153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424880

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.482		1.01	1.00	0.0931	pCi/L	84	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

Lab Sample ID: LCSD 160-424880/2-A
Matrix: Water
Analysis Batch: 428153

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424880

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER
				Uncert. (2σ+/-)							Limit
Radium-226	11.4	9.705		1.03	1.00	0.0752	pCi/L	85	75 - 125	0.11	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	103		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-424881/12-A
Matrix: Water
Analysis Batch: 427695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424881

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1038	U	0.219	0.220	1.00	0.376	pCi/L	04/21/19 09:23	05/08/19 15:59	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					04/21/19 09:23	05/08/19 15:59	1
Y Carrier	84.1		40 - 110					04/21/19 09:23	05/08/19 15:59	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
 SDG: 1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-424881/1-A
Matrix: Water
Analysis Batch: 427695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424881

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.23	8.765		1.03	1.00	0.407	pCi/L	95	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: LCSD 160-424881/2-A
Matrix: Water
Analysis Batch: 427695

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424881

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.23	8.691		1.02	1.00	0.370	pCi/L	94	75 - 125	0.04	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	86.4		40 - 110

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-88672-3
SDG: 1

Rad

Prep Batch: 424880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	PrecSep-21	
180-88672-3	EB-01	Total/NA	Water	PrecSep-21	
180-88672-4	FB-02	Total/NA	Water	PrecSep-21	

Prep Batch: 424881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88672-1	PZ-3	Total/NA	Water	PrecSep_0	
180-88672-3	EB-01	Total/NA	Water	PrecSep_0	
180-88672-4	FB-02	Total/NA	Water	PrecSep_0	

Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: Philip Evans 850-336-0192		COC No: 180-50457-10589-1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 3 DAY RUSH PO #: SCS10382606 WO #:		Carrier Tracking No(s): Analysis Requested:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - Nitrous Acid F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification: PZ-3 PZ-4 EB-01 FB-02		Field Filtered Sample (Yes or No): 6020_7470A 2540C_Calcd_300_ORGF_M_28D 9315_Ra226_9320_Ra228 Appendix 3 Appendix 4		Total Number of Containers:	
Sample Date: 4/5/19 Sample Time: 1335 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=biological, BT=biological, ANALY): Water		Preservation Code:		(Note: 180-88672 Chain of Custody)	
Sample Date: 4/5/19 Sample Time: 1015 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=biological, BT=biological, ANALY): Water		Preservation Code:		(Note: 180-88672 Chain of Custody)	
Sample Date: 4/5/19 Sample Time: 1018 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=biological, BT=biological, ANALY): Water		Preservation Code:		(Note: 180-88672 Chain of Custody)	
Sample Date: 4/5/19 Sample Time: 1338 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=biological, BT=biological, ANALY): Water		Preservation Code:		(Note: 180-88672 Chain of Custody)	
Sample Date: 4/5/19 Sample Time: 1330 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, B=biological, BT=biological, ANALY): Water		Preservation Code:		(Note: 180-88672 Chain of Custody)	
Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty If Relinquished by:		Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Special Instructions/QC Requirements: Method of Shipment:	
Date/Time: 4/5/19 1330 Date/Time:		Date/Time: 5/04/19 Date/Time:		Date/Time:	
Company: [Signature] Company:		Company: [Signature] Company:		Company:	
Date/Time:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Align FedEx Pouch Here



SDR



ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR19
ACTWGT: 52.80 LB
CAD: 006993800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

0 **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

15238

Handwritten notes and signatures

(412) 983-7068
INV:
PO:

REF:
DEPT:



FedEx Express



SDR

151967 REV 7/08 RRD

FedEx Saturday Delivery

1 of 2
TRK# 0201 7864 7555 6581
MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

FedEx
TRK# 0201 7864 7555 6581

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

Melted Pel

15238
PA-US
PIT



Uncorrected temp
Thermometer ID

11.2 °C
10
ND

CF 0 Initials

PT-WI-SR-001 effective 11/8/18

FID 106442 08APR19 PITA 55301/U/L5/BLCA

SDR

SDR



RT **NEW** 12:01
FZ

FedEx Saturday Delivery

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Do Not Lift Using This Tag

FedEx Express

SDR

FedEx Saturday Delivery

151967 REV 7/08 RRD

ORIGIN ID: 81XA (850) 336-0182
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

SHIP DATE: 05APR19
ACTWTG: 63.00 LB
CAD: 006983800/SSFE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

0 SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RETURNS
PITTSBURGH PA 15283

(412) 883-7058

15238
[Handwritten signature]

151967 REV 7/08 RRD

FedEx Saturday Delivery

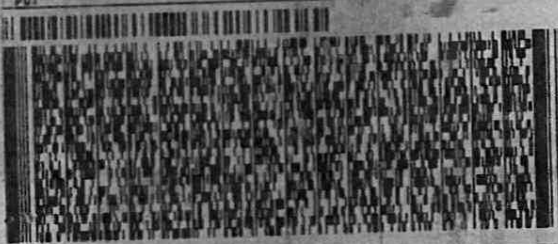
FedEx Express

SDR

151967 REV 7/08 RRD

FedEx Saturday Delivery

151967 REV 7/08 RRD



FedEx Express
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M1020100 118187

2 of 2

MPS# 7864 7555 6592
0263
Matr# 7864 7555 6581

SATURDAY 12:00P
PRIORITY OVERNIGHT

2 of 2

FedEx
MPS# 7864 7555 6592
0263

TUE - 09 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
PA-US
PIT



FTD 106442 08APR19 #ITA 553C1/D7E5/0C8A

Uncorrected temp
Thermometer ID

132 °C
to

Initials

NO

CF *[Signature]*

PT-WI-SR-001 effective 11/8/18

Delivery

151967 REV 7/08 RRD

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88672-3

SDG Number: 1

Login Number: 88672

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-88672-3

SDG Number: 1

Login Number: 88672

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/11/19 04:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89131-2
Laboratory Sample Delivery Group: 2
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
5/16/2019 5:01:46 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Job ID: 180-89131-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89131-2

Comments

No additional comments.

Receipt

The samples were received on 4/17/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.8° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-438206 and analytical batch 400-438847 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-438847 was outside control limits: (180-89131-C-1-A SD ^25)

Method(s) 200.8, 6020, SM 2340B: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1R (180-89131-2) and (180-89131-C-1-A ^50). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
 SDG: 2

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-89131-2	APMW-1R	Water	04/15/19 13:45	04/17/19 08:40
180-89131-3	EB-01	Water	04/15/19 13:10	04/17/19 08:40

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Client Sample ID: APMW-1R

Lab Sample ID: 180-89131-2

Date Collected: 04/15/19 13:45

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			276466	04/23/19 10:11	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			276466	04/23/19 10:27	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 01:42	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	50			439072	04/29/19 16:59	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 11:48	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	276188	04/18/19 13:27	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			277745	04/15/19 13:45	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Lab Sample ID: 180-89131-3

Date Collected: 04/15/19 13:10

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			276466	04/23/19 09:10	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 01:46	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			439072	04/29/19 16:35	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 11:56	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	276188	04/18/19 13:27	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Client Sample ID: APMW-1R

Lab Sample ID: 180-89131-2

Date Collected: 04/15/19 13:45

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			04/23/19 10:27	50
Fluoride	0.14	J	1.0	0.13	mg/L			04/23/19 10:11	5
Sulfate	8.6		5.0	1.9	mg/L			04/23/19 10:11	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0025		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 01:42	5
Barium	0.98		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 01:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:42	5
Cadmium	0.00045	J	0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:42	5
Cobalt	0.00042	J	0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 01:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 01:42	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 01:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 01:42	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 01:42	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 01:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 01:42	5
Lithium	0.012		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 01:42	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.9		0.50	0.21	mg/L		04/23/19 17:53	04/29/19 16:59	50
Calcium	130		2.5	1.3	mg/L		04/23/19 17:53	04/29/19 16:59	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00015	J B	0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		40	40	mg/L			04/18/19 13:27	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.68				SU			04/15/19 13:45	1

Client Sample ID: EB-01

Lab Sample ID: 180-89131-3

Date Collected: 04/15/19 13:10

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/23/19 09:10	1
Fluoride	<0.026		0.20	0.026	mg/L			04/23/19 09:10	1
Sulfate	<0.38		1.0	0.38	mg/L			04/23/19 09:10	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 01:46	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 01:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:46	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Client Sample ID: EB-01
Date Collected: 04/15/19 13:10
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.13		0.25	0.13	mg/L		04/23/19 17:53	04/27/19 01:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 01:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 01:46	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 01:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 01:46	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 01:46	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 01:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 01:46	5
Lithium	<0.0011		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 01:46	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/23/19 17:53	04/29/19 16:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/18/19 13:27	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 180-89131-2 MS
Matrix: Water
Analysis Batch: 439416

Client Sample ID: APMW-1R
Prep Type: Total/NA
Prep Batch: 439013
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00015	J B	0.00201	0.00187		mg/L		85	80 - 120

Lab Sample ID: 180-89131-2 MSD
Matrix: Water
Analysis Batch: 439416

Client Sample ID: APMW-1R
Prep Type: Total/NA
Prep Batch: 439013
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00015	J B	0.00201	0.00183		mg/L		83	80 - 120	2	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-276188/2
Matrix: Water
Analysis Batch: 276188

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/18/19 13:27	1

Lab Sample ID: LCS 180-276188/1
Matrix: Water
Analysis Batch: 276188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	184		mg/L		92	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-2
SDG: 2

HPLC/IC

Analysis Batch: 276466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	300.0	
180-89131-2	APMW-1R	Total/NA	Water	300.0	
180-89131-3	EB-01	Total/NA	Water	300.0	

Metals

Prep Batch: 438206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2 - DL	APMW-1R	Total Recoverable	Water	3005A	
180-89131-2	APMW-1R	Total Recoverable	Water	3005A	
180-89131-3	EB-01	Total Recoverable	Water	3005A	
180-89131-3 - RA	EB-01	Total Recoverable	Water	3005A	

Analysis Batch: 438847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total Recoverable	Water	6020	438206
180-89131-3	EB-01	Total Recoverable	Water	6020	438206

Prep Batch: 439013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	7470A	
180-89131-3	EB-01	Total/NA	Water	7470A	
180-89131-2 MS	APMW-1R	Total/NA	Water	7470A	
180-89131-2 MSD	APMW-1R	Total/NA	Water	7470A	

Analysis Batch: 439072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2 - DL	APMW-1R	Total Recoverable	Water	6020	438206
180-89131-3 - RA	EB-01	Total Recoverable	Water	6020	438206

Analysis Batch: 439416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	7470A	439013
180-89131-3	EB-01	Total/NA	Water	7470A	439013
180-89131-2 MS	APMW-1R	Total/NA	Water	7470A	439013
180-89131-2 MSD	APMW-1R	Total/NA	Water	7470A	439013

General Chemistry

Analysis Batch: 276188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	SM 2540C	
180-89131-3	EB-01	Total/NA	Water	SM 2540C	
MB 180-276188/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-276188/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 277745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Chain of Custody Record

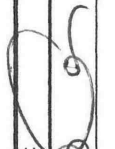
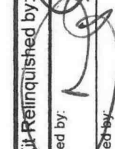


Client Information Client Contact: Corey Ladner Phone: 850-336-0192 Company: Southern Company		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSONW#:		Analysis Requested Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 6020, 7470A 2540C_Calcd, 300_ORGFM, 28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4			
Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)			
Sample Identification APW-1		Sample Date 4/15/19	Sample Time 1530	Sample Type (C=Comp, G=grab) G	Matrix (W=water, S=solid, O=other) Preservation Code: Water
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Relinquished by: Relinquished by: Relinquished by:		Method of Shipment: Received by: <i>Julius Waters</i> Date/Time: 4-17-19 Company: <i>APW</i> Received by: <i>890</i> Date/Time: Company: Received by: Date/Time: Company:			
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record

681-Atlanta

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 850-336-0192 Sampler: Philip Evans		Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested Field Filtered Sample (Yes or No)			
Sample Identification APMW-1R EB-01		Sample Date 4/15/19 4/15/19	Sample Time 1345 1310	Sample Type (C=Comp, G=grab) G G	Matrix (W=water, S=solid, O=water, I=ice, A=air) Water Water
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by:  Relinquished by:  Relinquished by:		Method of Shipment:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): _____		COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #: _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSOW#: _____		Analysis Requested Total Number of Containers: _____			
Sample Identification Sample ID: PZ-4 Sample ID: FB-01		Sample Date 4/15/19 4/15/19	Sample Time 1245 1230	Sample Type (C=Comp, G=grab) G G	Matrix (Water, Sewage, Sludge, Oil, Other) Water Water Water Water Water Water Water
Preservation Code: _____ Other: _____		Special Instructions/Note: _____			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify) _____					
Empty Kit Relinquished by: _____ Date: _____					
Relinquished by: _____ Date/Time: 4/16/19 1215 Company: PCH					
Relinquished by: _____ Date/Time: _____ Company: _____					
Relinquished by: _____ Date/Time: _____ Company: _____					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: _____					



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180-99131 Waybill



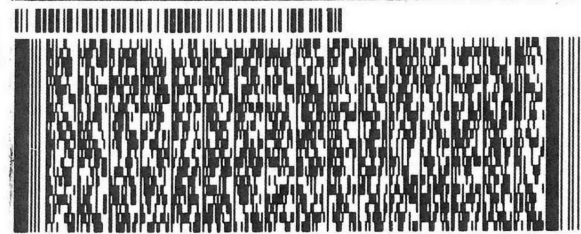
ORIGIN ID: BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

SHIP DATE: 16APR19
 ACTWGT: 64.50 LB
 CAD: 006993800/SSFE2002
 DIMS: 24x13x14 IN
 BILL THIRD PARTY

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15283 *15238*

(412) 963-7068 REF: INU: DEPT: PO:



2 of 2 **WED - 17 APR 10:30A**
 MPS# **7866 8855 8053** **PRIORITY OVERNIGHT**
 0263

FedEx 2 of 2 **THU - 18 APR 10:30A**
 MPS# **7866 8855 8053** **PRIORITY OVERNIGHT**
 0263

65 AGCA **15238**
 PA-US
PIT

Uncorrected temp 25 °C
 Thermometer ID 10

CF 0 Initials JB

PT-WI-SR-001 effective 11/8/18



FID 106442 17APR19 PITA 553C1/D7E5/0C8A

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ORIGIN ID:BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

NEW
 10:30
 8042
 04 17

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

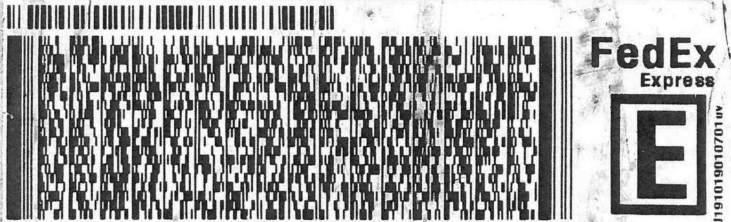
PITTSBURGH PA 15283

(412) 963-7068
 TRU:
 PO:

REF:

DEPT:

15238



1 of 2
 TRK# 7866 8855 8042

WED - 17 APR 10:30A

FedEx
 TRK#
 0201 7866 8855 8042

WED - 17 APR 10:30A
 PRIORITY OVERNIGHT

65 AGCA

15238
 PA-US
 PIT

Uncorrected temp 28 °C
 Thermometer ID 10
 CF 0 Initials TS

PT-WI-SR-001 effective 11/9/18

FID 1

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-2

SDG Number: 2

Login Number: 89131

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-2

SDG Number: 2

Login Number: 89131

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/19/19 04:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3°C, 0.7°C IR 7
COC is present.	False	missing ICOC
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89131-3
Laboratory Sample Delivery Group: 3
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
5/16/2019 5:09:03 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
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Have a Question?



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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Job ID: 180-89131-3

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-89131-3**

Comments

No additional comments.

Receipt

The samples were received on 4/17/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.8° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-438206 and analytical batch 400-438847 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-438847 was outside control limits: (180-89131-C-1-A SD ^25)

Method(s) 200.8, 6020, SM 2340B: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-3 (180-89131-4), DUP-01 (180-89131-5) and (180-89131-C-1-A ^50). Elevated reporting limits (RLs) are provided.

Method(s) 245.1, 7470A: The method blank for preparation batch 400-439013 and analytical batch 400-439416 contained Mercury, Dissolved above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
 SDG: 3

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-89131-4	PZ-3	Water	04/15/19 11:30	04/17/19 08:40
180-89131-5	DUP-01	Water	04/15/19 10:30	04/17/19 08:40

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Client Sample ID: PZ-3

Lab Sample ID: 180-89131-4

Date Collected: 04/15/19 11:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			276466	04/23/19 07:38	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		100			276466	04/23/19 07:53	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 01:50	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	100			439072	04/29/19 17:03	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 11:58	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	276188	04/18/19 13:27	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			277745	04/15/19 11:30	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01

Lab Sample ID: 180-89131-5

Date Collected: 04/15/19 10:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			276466	04/23/19 08:09	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		100			276466	04/23/19 08:24	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 01:54	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	100			439072	04/29/19 17:08	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 12:00	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	276188	04/18/19 13:27	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Client Sample ID: PZ-3

Lab Sample ID: 180-89131-4

Date Collected: 04/15/19 11:30

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3400		100	71	mg/L			04/23/19 07:53	100
Fluoride	<0.26		2.0	0.26	mg/L			04/23/19 07:38	10
Sulfate	700		10	3.8	mg/L			04/23/19 07:38	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 01:50	5
Barium	0.067		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 01:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:50	5
Cobalt	0.0045		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 01:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 01:50	5
Molybdenum	0.40		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 01:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 01:50	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 01:50	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 01:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 01:50	5
Lithium	0.054		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 01:50	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		1.0	0.42	mg/L		04/23/19 17:53	04/29/19 17:03	100
Calcium	390		5.0	2.5	mg/L		04/23/19 17:53	04/29/19 17:03	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6600		100	100	mg/L			04/18/19 13:27	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.14				SU			04/15/19 11:30	1

Client Sample ID: DUP-01

Lab Sample ID: 180-89131-5

Date Collected: 04/15/19 10:30

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3900		100	71	mg/L			04/23/19 08:24	100
Fluoride	<0.26		2.0	0.26	mg/L			04/23/19 08:09	10
Sulfate	760		10	3.8	mg/L			04/23/19 08:09	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 01:54	5
Barium	0.066		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 01:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:54	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

Client Sample ID: DUP-01
Date Collected: 04/15/19 10:30
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 01:54	5
Cobalt	0.0043		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 01:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 01:54	5
Molybdenum	0.40		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 01:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 01:54	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 01:54	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 01:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 01:54	5
Lithium	0.052		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 01:54	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		1.0	0.42	mg/L		04/23/19 17:53	04/29/19 17:08	100
Calcium	490		5.0	2.5	mg/L		04/23/19 17:53	04/29/19 17:08	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6800		100	100	mg/L			04/18/19 13:27	1

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-3
SDG: 3

HPLC/IC

Analysis Batch: 276466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total/NA	Water	300.0	
180-89131-4	PZ-3	Total/NA	Water	300.0	
180-89131-5	DUP-01	Total/NA	Water	300.0	
180-89131-5	DUP-01	Total/NA	Water	300.0	

Metals

Prep Batch: 438206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total Recoverable	Water	3005A	
180-89131-4 - DL	PZ-3	Total Recoverable	Water	3005A	
180-89131-5 - DL	DUP-01	Total Recoverable	Water	3005A	
180-89131-5	DUP-01	Total Recoverable	Water	3005A	

Analysis Batch: 438847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total Recoverable	Water	6020	438206
180-89131-5	DUP-01	Total Recoverable	Water	6020	438206

Prep Batch: 439013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total/NA	Water	7470A	
180-89131-5	DUP-01	Total/NA	Water	7470A	

Analysis Batch: 439072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4 - DL	PZ-3	Total Recoverable	Water	6020	438206
180-89131-5 - DL	DUP-01	Total Recoverable	Water	6020	438206

Analysis Batch: 439416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total/NA	Water	7470A	439013
180-89131-5	DUP-01	Total/NA	Water	7470A	439013

General Chemistry

Analysis Batch: 276188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total/NA	Water	SM 2540C	
180-89131-5	DUP-01	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 277745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-4	PZ-3	Total/NA	Water	Field Sampling	

Chain of Custody Record

684-Atlanta

Client Information		Lab PM: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-50459-10589.1	
Client Contact: Corey Ladner		E-Mail: veronica.bortot@testamericainc.com		Page: Page 1 of 1		Job #:	
Company: Southern Company		Address: PO BOX 2641 GSC8		Due Date Requested:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - EDA Z - other (specify) Other:	
City: Birmingham		State, Zip: AL, 35291		TAT Requested (days):		Total Number of containers	
Phone:		PO #: SCS10382606		Field Filtered Sample (Yes or No):		Special I:	
Email: X2CTLADN@SOUTHERNCO.COM		WO #:		620, 7470A		620, 7470A	
Project Name: CCR - Plant Watson		Project #: 18020186		2540C_Calcd, 300_ORGFM_28D		9315_Ra226, 9320_Ra228	
Site:		SSOW#:		D		N	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
APW-1		4/15/19		1530		G	
Matrix (W=water, S=solid, O=other)		Preservation Code:		Matrix		Matrix	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	
Water				Water		Water	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [Signature]

Relinquished by: [Signature] Date/Time: 4/16/19 1215 Company: [Signature]

Relinquished by: [Signature] Date/Time: [Signature] Company: [Signature]

Relinquished by: [Signature] Date/Time: [Signature] Company: [Signature]

Custody Seals Intact: Yes No Δ

Custody Seal No.:

Method of Shipment: [Signature] Date/Time: 4-17-19 Company: [Signature]

Return To Client Disposal By Lab Archive For Months: 890



Chain of Custody Record



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 850-336-0192 Sampler: Philip Evans		Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:			
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4					
6020_7470A 2540C_Calcd, 300_ORGFM, 28D 9315_Ra226, 9320_Ra228		Total Number of Containers					
Sample Identification APMW-1R EB-01		Sample Date 4/15/19 4/15/19	Sample Time 1345 1310	Sample Type (C=Comp, G=grab) G G	Matrix (W=water, S=solid, O=water, I=ice, T=tissue, A=air) Preservation Code: Water Water Water Water Water Water Water Water	Field Filtered Sample (Yes or No)	Special Instructions/Note:
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:			
Empty Kit/Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by:		Date/Time: 4/16/19 1215 Date/Time: Date/Time:		Method of Shipment: Received by: Phillip Watson Date/Time: 4-17-19 Company: Received by: 840 Date/Time: Company: Received by: Date/Time: Company:			
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record

681-Atlanta

Client Information
 Client Contact: Philip Evans
 Phone: 850-336-0192
 Lab PM: Bortot, Veronica
 E-Mail: veronica.bortot@testamericainc.com

Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 PO #: SCS10382606
 WO #: 6020_7470A
 Project #: 18020186
 SSO: CCR - Plant Watson
 Email: X2CTLADN@SOUTHERNCO.COM
 Site: CCR - Plant Watson

Due Date Requested: _____
 TAT Requested (days): _____

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (if water, specify container, BT=Tissue, AF=Air)	Preservation Code	Field Filtered Sample (Yes or No)	D	N	D	Special Instructions/Note:					
										Total Number of Containers	Return To Client	Archive For	Months		
RZ-3	4/15/19	1130	G	Water		X					Appendix 3				
Ap-01	4/15/19	1030	G	Water		X					Appendix 4				
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											
				Water											

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____

Relinquished by: _____
 Date/Time: 4/16/19 1215
 Company: PDI

Relinquished by: _____
 Date/Time: _____
 Company: _____

Relinquished by: _____
 Date/Time: _____
 Company: _____

Custody Seals Intact: _____
 Δ Yes Δ No

Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Sample Disposal: (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: _____

Method of Shipment: _____

Received by: _____
 Date/Time: 4/17-19
 Company: _____

Received by: _____
 Date/Time: 8:40
 Company: _____

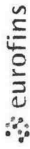
Received by: _____
 Date/Time: _____
 Company: _____

Chain of Custody Record

681-Atlanta

Sampler: Philip Evans Phone: 850-336-0192			Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com			Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:			
Due Date Requested: TAT Requested (days):			Analysis Requested			Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)			
Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone:			Field Filtered Sample (Yes or No)			Total Number of Containers			
PO #: SCS10382606 WO #:			D N D 6020, 7470A 2540C_Calcd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228			Special Instructions/Note:			
Email: X2CTLADN@SOUTHERNCO.COM Project Name: 18020186 CCR - Plant Watson Site:			Matrix (Water, Swab, Overstabil, BT-Tissue, AAMF)			Special Instructions/Note:			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Matrix	Field Filtered Sample (Yes or No)	D	N	D
PZ-4	4/15/19	1245	G		Water	X			
FB-01	4/15/19	1230	G		Water	X			
					Water				
					Water				
					Water				
					Water				
					Water				
					Water				
					Water				
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:						
Empty Kit Relinquished by:			Method of Shipment:						
Relinquished by:			Date/Time: 4/16/19 1215						
Relinquished by:			Date/Time:						
Relinquished by:			Date/Time:						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Cooler Temperature(s) °C and Other Remarks:						

Chain of Custody Record



684-Atlanta

Client Information Client Contact: Philip Evans Phone: 850-336-0192			Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com			Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: 1 of 1 Job #:		
Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:			Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:			Analysis Requested Total Number of Containers:		
Sample Identification Sample ID: PZ-1 Sample ID: PZ-2 Sample ID: Dup-02			Field Filtered Sample (Yes or No) D N D 6020, 7470A 2540C_Calcd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4			Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Sample Date 4/16/19 4/16/19 4/16/19			Sample Time 0805 0905 0705			Sample Type (C=Comp, G=grab) G G G		
Matrix (Water, Swable, Overstabil, BT-TISSUE, AAUP) Water Water Water Water Water Water Water			Preservation Code:			Special Instructions/Note:		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			Deliverable Requested: I, II, III, IV, Other (specify)			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Empty Kit Relinquished by:			Date:			Method of Shipment:		
Relinquished by:			Date/Time: 4/16/19 1215 Company: PDH			Date/Time: 4-12-19 Company:		
Relinquished by:			Date/Time:			Date/Time: 890 Company:		
Relinquished by:			Date/Time:			Date/Time:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:		



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

180-99131 Waybill



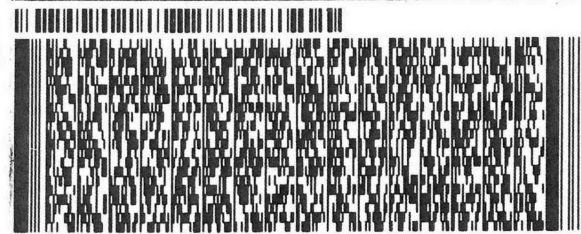
ORIGIN ID: BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

SHIP DATE: 16APR19
 ACTWGT: 64.50 LB
 CAD: 006993800/SSFE2002
 DIMS: 24x13x14 IN
 BILL THIRD PARTY

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15283 15238

(412) 963-7068 REF: INU: DEPT: PO:



2 of 2 WED - 17 APR 10:30A
 MPS# 7866 8855 8053 PRIORITY OVERNIGHT
 0263

FedEx 2 of 2 THU - 18 APR 10:30A
 MPS# 7866 8855 8053 PRIORITY OVERNIGHT
 0263

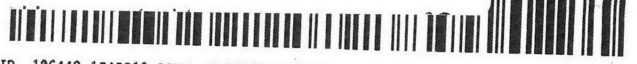
65 AGCA

15238
 PA-US
PIT

Uncorrected temp 25 °C
 Thermometer ID 10

CF 0 Initials JB

PT-WI-SR-001 effective 11/8/18



FID 106442 17APR19 PITA 553C1/D7E5/0C8A

1
2
3
4
5
6
7
8
9
10
11
12



ORIGIN ID:BIXA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE
PACE, FL 32571
UNITED STATES US

NEW
10:30
8042
04 17

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

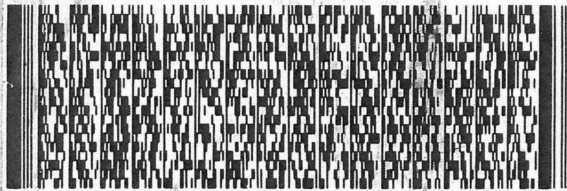
PITTSBURGH PA 15283

(412) 963-7068
TRU:
PO:

REF:

DEPT:

15238



FedEx
Express



56511/07E5/2340
648242 0800 1/17

1 of 2

WED - 17 APR 10:30A

TRK# 7866 8855 8042

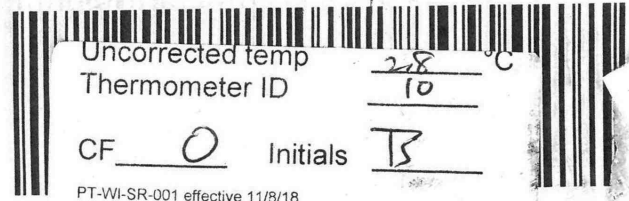
FedEx

TRK# 7866 8855 8042
0201

WED - 17 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
PA-US
PIT



Uncorrected temp 28 °C
Thermometer ID 10

CF 0 Initials TS

PT-WI-SR-001 effective 11/8/18

FID 1

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-3

SDG Number: 3

Login Number: 89131

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-3

SDG Number: 3

Login Number: 89131

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/19/19 04:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3°C, 0.7°C IR 7
COC is present.	False	missing ICOC
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89131-5
Laboratory Sample Delivery Group: 5
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
5/31/2019 6:19:18 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Job ID: 180-89131-5

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89131-5

Comments

No additional comments.

Receipt

The samples were received on 4/17/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.8° C.

Anions

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-276466 were outside control limits for Fluoride. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-438206 and analytical batch 400-438847 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-438847 was outside control limits: (180-89131-C-1-A SD ^25)

Method(s) 200.8, 6020, SM 2340B: The following sample was diluted to bring the concentration of target analytes within the calibration range: (180-89131-C-1-A ^50). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
 SDG: 5

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-19 *
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-89131-8	PZ-1	Water	04/16/19 08:05	04/17/19 08:40
180-89131-9	PZ-2	Water	04/16/19 09:05	04/17/19 08:40
180-89131-10	DUP-02	Water	04/16/19 07:05	04/17/19 08:40

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Client Sample ID: PZ-1

Lab Sample ID: 180-89131-8

Date Collected: 04/16/19 08:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			276466	04/23/19 06:37	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 02:06	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			439072	04/29/19 16:43	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 12:05	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	276315	04/19/19 17:33	TAM	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			276466	04/23/19 11:13	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 02:10	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			439072	04/29/19 16:47	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 12:15	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	276315	04/19/19 17:33	TAM	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-02

Lab Sample ID: 180-89131-10

Date Collected: 04/16/19 07:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			276466	04/23/19 07:23	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020		5			438847	04/27/19 02:14	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	438206	04/23/19 17:53	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			439072	04/29/19 16:51	DRE	TAL PEN
Instrument ID: ICPMS7700										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Client Sample ID: DUP-02

Lab Sample ID: 180-89131-10

Date Collected: 04/16/19 07:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			40 mL	40 mL	439013	04/30/19 10:45	JAP	TAL PEN
Total/NA	Analysis	7470A		1			439416	05/02/19 12:17	JAP	TAL PEN
		Instrument ID: HYDRA AA2								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	276315	04/19/19 17:33	TAM	TAL PIT
		Instrument ID: NOEQUIP								

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

MJH = Matthew Hartman

TAM = Tessa Mastalski

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Client Sample ID: PZ-1

Lab Sample ID: 180-89131-8

Date Collected: 04/16/19 08:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.7		1.0	0.71	mg/L			04/23/19 06:37	1
Fluoride	0.034	J F1	0.20	0.026	mg/L			04/23/19 06:37	1
Sulfate	0.68	J	1.0	0.38	mg/L			04/23/19 06:37	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 02:06	5
Barium	0.081		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 02:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:06	5
Calcium	13		0.25	0.13	mg/L		04/23/19 17:53	04/27/19 02:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 02:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 02:06	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 02:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 02:06	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 02:06	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 02:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 02:06	5
Lithium	0.0081		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 02:06	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/23/19 17:53	04/29/19 16:43	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 12:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		10	10	mg/L			04/19/19 17:33	1

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.71	mg/L			04/23/19 11:13	1
Fluoride	0.055	J	0.20	0.026	mg/L			04/23/19 11:13	1
Sulfate	2.5		1.0	0.38	mg/L			04/23/19 11:13	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0013		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 02:10	5
Barium	0.072		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 02:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:10	5
Calcium	12		0.25	0.13	mg/L		04/23/19 17:53	04/27/19 02:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 02:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 02:10	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 02:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 02:10	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 02:10	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 02:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 02:10	5
Lithium	0.012		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 02:10	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/23/19 17:53	04/29/19 16:47	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		10	10	mg/L			04/19/19 17:33	1

Client Sample ID: DUP-02

Lab Sample ID: 180-89131-10

Date Collected: 04/16/19 07:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8		1.0	0.71	mg/L			04/23/19 07:23	1
Fluoride	0.033	J	0.20	0.026	mg/L			04/23/19 07:23	1
Sulfate	0.69	J	1.0	0.38	mg/L			04/23/19 07:23	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/23/19 17:53	04/27/19 02:14	5
Barium	0.083		0.0025	0.00049	mg/L		04/23/19 17:53	04/27/19 02:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:14	5
Calcium	13		0.25	0.13	mg/L		04/23/19 17:53	04/27/19 02:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/23/19 17:53	04/27/19 02:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/23/19 17:53	04/27/19 02:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/23/19 17:53	04/27/19 02:14	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		04/23/19 17:53	04/27/19 02:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/23/19 17:53	04/27/19 02:14	5
Antimony	<0.0010		0.0025	0.0010	mg/L		04/23/19 17:53	04/27/19 02:14	5
Selenium	<0.00071		0.0013	0.00071	mg/L		04/23/19 17:53	04/27/19 02:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/23/19 17:53	04/27/19 02:14	5
Lithium	0.0086		0.0050	0.0011	mg/L		04/23/19 17:53	04/27/19 02:14	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		04/23/19 17:53	04/29/19 16:51	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
 SDG: 5

Client Sample ID: DUP-02
Date Collected: 04/16/19 07:05
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-10
Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/30/19 10:45	05/02/19 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		10	10	mg/L			04/19/19 17:33	1

- 1
- 2
- 3
- 4
- 5
- 6
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- 9
- 10
- 11
- 12
- 13

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-276466/6
Matrix: Water
Analysis Batch: 276466

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			04/23/19 06:06	1
Fluoride	<0.026		0.20	0.026	mg/L			04/23/19 06:06	1
Sulfate	<0.38		1.0	0.38	mg/L			04/23/19 06:06	1

Lab Sample ID: LCS 180-276466/5
Matrix: Water
Analysis Batch: 276466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.3		mg/L		105	90 - 110
Fluoride	1.25	1.31		mg/L		105	90 - 110
Sulfate	25.0	26.7		mg/L		107	90 - 110

Lab Sample ID: 180-89131-8 MS
Matrix: Water
Analysis Batch: 276466

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.7		25.0	35.7		mg/L		108	80 - 120
Fluoride	0.034	J F1	1.25	0.738	F1	mg/L		56	80 - 120
Sulfate	0.68	J	25.0	27.1		mg/L		106	80 - 120

Lab Sample ID: 180-89131-8 MSD
Matrix: Water
Analysis Batch: 276466

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.7		25.0	33.7		mg/L		100	80 - 120	6	20
Fluoride	0.034	J F1	1.25	0.712	F1	mg/L		54	80 - 120	4	20
Sulfate	0.68	J	25.0	25.2		mg/L		98	80 - 120	7	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-276315/2
Matrix: Water
Analysis Batch: 276315

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			04/19/19 17:33	1

Lab Sample ID: LCS 180-276315/1
Matrix: Water
Analysis Batch: 276315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	196		mg/L		98	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-5
SDG: 5

HPLC/IC

Analysis Batch: 276466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total/NA	Water	300.0	
180-89131-9	PZ-2	Total/NA	Water	300.0	
180-89131-10	DUP-02	Total/NA	Water	300.0	
MB 180-276466/6	Method Blank	Total/NA	Water	300.0	
LCS 180-276466/5	Lab Control Sample	Total/NA	Water	300.0	
180-89131-8 MS	PZ-1	Total/NA	Water	300.0	
180-89131-8 MSD	PZ-1	Total/NA	Water	300.0	

Metals

Prep Batch: 438206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total Recoverable	Water	3005A	
180-89131-8 - RA	PZ-1	Total Recoverable	Water	3005A	
180-89131-9	PZ-2	Total Recoverable	Water	3005A	
180-89131-9 - RA	PZ-2	Total Recoverable	Water	3005A	
180-89131-10	DUP-02	Total Recoverable	Water	3005A	
180-89131-10 - RA	DUP-02	Total Recoverable	Water	3005A	

Analysis Batch: 438847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total Recoverable	Water	6020	438206
180-89131-9	PZ-2	Total Recoverable	Water	6020	438206
180-89131-10	DUP-02	Total Recoverable	Water	6020	438206

Prep Batch: 439013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total/NA	Water	7470A	
180-89131-9	PZ-2	Total/NA	Water	7470A	
180-89131-10	DUP-02	Total/NA	Water	7470A	

Analysis Batch: 439072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8 - RA	PZ-1	Total Recoverable	Water	6020	438206
180-89131-9 - RA	PZ-2	Total Recoverable	Water	6020	438206
180-89131-10 - RA	DUP-02	Total Recoverable	Water	6020	438206

Analysis Batch: 439416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total/NA	Water	7470A	439013
180-89131-9	PZ-2	Total/NA	Water	7470A	439013
180-89131-10	DUP-02	Total/NA	Water	7470A	439013

General Chemistry

Analysis Batch: 276315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-8	PZ-1	Total/NA	Water	SM 2540C	
180-89131-9	PZ-2	Total/NA	Water	SM 2540C	
180-89131-10	DUP-02	Total/NA	Water	SM 2540C	
MB 180-276315/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-276315/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

Chain of Custody Record



684-Atlanta

Client Information Client Contact: Corey Ladner Phone: 850-336-0192 Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested Field Filtered Sample (Yes or No): 620, 7470A 2540C_Calcd, 300_ORGFM, 28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4	
Sample Identification APW-1 Sample Date: 4/15/19 1530 Sample Time: 1530 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Solid, O=Other): Water Preservation Code:		Total Number of Containers: X Special I:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Relinquished by: [Signature] Relinquished by: Relinquished by:		Method of Shipment: Date/Time: 4/16/19 1215 Date/Time: Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Received by: [Signature] Received by: Received by:	
Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 890 Company:	



Chain of Custody Record

Client Information
 Client Contact: Philip Evans
 Phone: 850-336-0192
 Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone: _____
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site: _____

Lab PM: Bortot, Veronica
 E-Mail: veronica.bortot@testamericainc.com
 Carrier Tracking No(s): _____
 COC No: 180-50459-10589.1
 Page: Page 1 of 1
 Job #: _____

Due Date Requested: _____
 TAT Requested (days): _____
 PO #: _____
 SCS10382606
 WO #: _____
 Project #: 18020186
 SSOW#: _____

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=water, I=ice, A=Air)	Field Filtered Sample (Yes or No)	Analysis Requested		Special Instructions/Note:
						Sample Time	Sample Date	
APMW-1R	4/15/19	1345	G	Water		Appendix 3		
EB-01	4/15/19	1310	G	Water		Appendix 4		
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify) _____

Empty Kit/Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Date/Time: 4/16/19 1215
 Date/Time: _____
 Date/Time: _____
 Date/Time: _____
 Company: POH
 Company: _____
 Company: _____
 Company: _____
 Method of Shipment: _____
 Date/Time: 4-17-19
 Date/Time: 8:40
 Date/Time: _____
 Company: _____
 Company: _____
 Cooler Temperature(s) °C and Other Remarks: _____



Chain of Custody Record



Client Information Client Contact: Philip Evans Phone: 850-336-0192 Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Camer Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #: Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSO#: Field Filtered Sample (Yes or No)		Analysis Requested 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGM, 28D 6020, 7470A D N D Appendix 3 Appendix 4		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - ASNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Special Instructions/Note: Total Number of Containers	
Sample Identification Sample ID: RZ-3 Description: Ap-01 Sample Date: 4/15/19 Sample Time: 1130 Matrix: Water Sample Type (C=comp, G=grab): G Preservation Code:		Sample Date: 4/15/19 Sample Time: 1030 Matrix: Water Sample Type (C=comp, G=grab): G Preservation Code:		Sample Date: Sample Time: Matrix: Sample Type (C=comp, G=grab): Preservation Code:		Sample Date: Sample Time: Matrix: Sample Type (C=comp, G=grab): Preservation Code:			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by: Relinquished by: [Signature] Date: 4/16/19 1215 Company: PDH Relinquished by: Date/Time: Company: Relinquished by: Date/Time: Company:									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:									
Method of Shipment: Received by: [Signature] Date/Time: 4/17/19 Company: [Signature] Received by: Date/Time: 840 Company: Received by: Date/Time: Company: Cooler Temperature(s) °C and Other Remarks:									
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:							



Chain of Custody Record



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): _____		COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #: _____	
Due Date Requested: TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSOW#: _____		Analysis Requested Total Number of Containers: _____			
Sample Identification Sample ID: PZ-4 Sample ID: FB-01		Sample Date 4/15/19 4/15/19	Sample Time 1245 1230	Sample Type (C=Comp, G=grab) G G	Matrix (Water, Sewage, Oil, Other) Water Water Water Water Water Water Water
Sample Date: 4/15/19 Sample Time: 1245 Sample Type: G Matrix: Water		Field Filtered Sample (Yes or No)	D N D 6020, 7470A 2540C_Calcd, 300_ORGFM, 28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4	Preservation Code: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____	Special Instructions/Note: _____
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Method of Shipment: Date/Time: 4/16/19 1215 Date/Time: _____ Date/Time: _____ Date/Time: _____			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: _____			



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____				Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com				Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:					
Due Date Requested: TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSOW#: _____				Analysis Requested				Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____					
Sample Identification				Field Filtered Sample (Yes or No)				Total Number of Containers					
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, Overstain, BT-Tissue, AAUP)	Preservation Code:								Special Instructions/Note:
PZ-1	4/16/19	0805	G	Water									
PZ-2	4/16/19	0905	G	Water									
Dup-02	4/16/19	0705	G	Water									
				Water									
				Water									
				Water									
				Water									
				Water									

Return To Client
 Disposal By Lab
 Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Custody Seals Intact: Yes No
 Custody Seal No.:

Received by: *Appendix Watson* Date/Time: 4-17-19 Company: *Appendix Watson*
 Received by: _____ Date/Time: 8:40 Company: _____
 Received by: _____ Date/Time: _____ Company: _____

Method of Shipment: _____
 Cooler Temperature(s) °C and Other Remarks:

- 1
- 2
- 3
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180-99131 Waybill



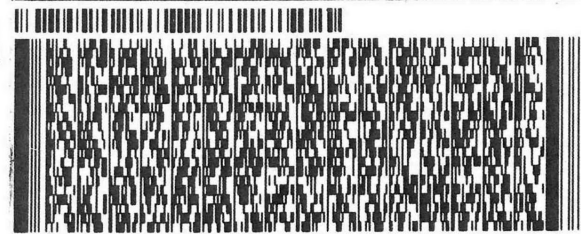
ORIGIN ID: BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

SHIP DATE: 16APR19
 ACTWGT: 64.50 LB
 CAD: 006993800/SSFE2002
 DIMS: 24x13x14 IN
 BILL THIRD PARTY

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15283 15238

(412) 963-7068 REF: INU: DEPT: PO:



2 of 2 WED - 17 APR 10:30A
 MPS# 7866 8855 8053 PRIORITY OVERNIGHT
 0263

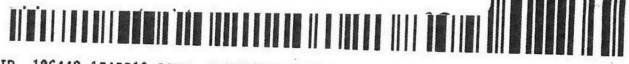
FedEx 2 of 2 THU - 18 APR 10:30A
 MPS# 7866 8855 8053 PRIORITY OVERNIGHT
 0263

65 AGCA 15238
 PA-US
 PIT

Uncorrected temp 25 °C
 Thermometer ID 10

CF 0 Initials JB

PT-WI-SR-001 effective 11/8/18



FID 106442 17APR19 PITA 553C1/D7E5/0C8A

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- 10
- 11
- 12
- 13

ORIGIN ID:BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

NEW
 10:30
 8042
 04 17

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

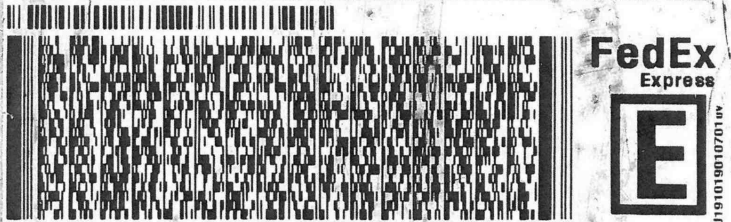
PITTSBURGH PA 15283

(412) 963-7068
 TRU:
 PO:

REF:

DEPT:

15238



1 of 2
 TRK# 7866 8855 8042

WED - 17 APR 10:30A

FedEx
 TRK# 7866 8855 8042
 0201

WED - 17 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
 PA-US
PIT

Uncorrected temp 28 °C
 Thermometer ID 10
 CF 0 Initials TS

PT-WI-SR-001 effective 11/9/18

FID 1

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-5

SDG Number: 5

Login Number: 89131

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-5

SDG Number: 5

Login Number: 89131

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 04/19/19 04:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3°C, 0.7°C IR 7
COC is present.	False	missing ICOC
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89131-6
Laboratory Sample Delivery Group: 6
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
7/31/2019 4:49:49 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Job ID: 180-89131-6

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89131-6

Comments

No additional comments.

Receipt

The samples were received on 4/17/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.8° C.

RAD

Method(s) 9315: Ra-226 Prep Batch 160-426025

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1 (180-89131-1), APMW-1R (180-89131-2), EB-01 (180-89131-3), PZ-3 (180-89131-4), DUP-01 (180-89131-5), PZ-4 (180-89131-6), FB-01 (180-89131-7), PZ-1 (180-89131-8), PZ-2 (180-89131-9), DUP-02 (180-89131-10), (LCS 160-426025/1-A), (LCSD 160-426025/2-A) and (MB 160-426025/23-A)

Method(s) 9320: Ra-228 Prep Batch 160-426029

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1 (180-89131-1), APMW-1R (180-89131-2), EB-01 (180-89131-3), PZ-3 (180-89131-4), DUP-01 (180-89131-5), PZ-4 (180-89131-6), FB-01 (180-89131-7), PZ-1 (180-89131-8), PZ-2 (180-89131-9), DUP-02 (180-89131-10), (LCS 160-426029/1-A), (LCSD 160-426029/2-A) and (MB 160-426029/23-A)

Method(s) PrecSep_0: Radium 228 Prep Batch 426029

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (180-89131-1), APMW-1R (180-89131-2), EB-01 (180-89131-3), PZ-3 (180-89131-4), DUP-01 (180-89131-5), PZ-4 (180-89131-6), FB-01 (180-89131-7), PZ-1 (180-89131-8), PZ-2 (180-89131-9) and DUP-02 (180-89131-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep_0: Radium 228 Prep batch 426029:

This sample had a sulfurous smell: APMW-1 (180-89131-1).

Method(s) PrecSep-21: Radium 226 Prep Batch 426025:

Insufficient sample volume was available to perform a sample duplicate for the following samples: APMW-1 (180-89131-1), APMW-1R (180-89131-2), EB-01 (180-89131-3), PZ-3 (180-89131-4), DUP-01 (180-89131-5), PZ-4 (180-89131-6), FB-01 (180-89131-7), PZ-1 (180-89131-8), PZ-2 (180-89131-9) and DUP-02 (180-89131-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Job ID: 180-89131-6 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

Method(s) PrecSep-21: Radium 226 Prep Batch 426025:

This sample had a sulfurous smell:APMW-1 (180-89131-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
 SDG: 6

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	06-04-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Hawaii	State Program	9	NA	06-30-19 *
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-20
Michigan	State Program	5	9005	06-30-19 *
Missouri	State Program	7	780	06-30-20
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-20
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-20
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89131-2	APMW-1R	Water	04/15/19 13:45	04/17/19 08:40	
180-89131-3	EB-01	Water	04/15/19 13:10	04/17/19 08:40	
180-89131-4	PZ-3	Water	04/15/19 11:30	04/17/19 08:40	
180-89131-5	DUP-01	Water	04/15/19 10:30	04/17/19 08:40	
180-89131-7	FB-01	Water	04/15/19 12:30	04/17/19 08:40	
180-89131-8	PZ-1	Water	04/16/19 08:05	04/17/19 08:40	
180-89131-9	PZ-2	Water	04/16/19 09:05	04/17/19 08:40	
180-89131-10	DUP-02	Water	04/16/19 07:05	04/17/19 08:40	

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: APMW-1R

Lab Sample ID: 180-89131-2

Date Collected: 04/15/19 13:45

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.17 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429534	05/22/19 06:20	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Prep	PrecSep_0			1000.17 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Lab Sample ID: 180-89131-3

Date Collected: 04/15/19 13:10

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.70 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			999.70 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-3

Lab Sample ID: 180-89131-4

Date Collected: 04/15/19 11:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.42 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			1000.42 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-89131-5

Date Collected: 04/15/19 10:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.13 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: DUP-01

Lab Sample ID: 180-89131-5

Date Collected: 04/15/19 10:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.13 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: FB-01

Lab Sample ID: 180-89131-7

Date Collected: 04/15/19 12:30

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.46 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			1000.46 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-1

Lab Sample ID: 180-89131-8

Date Collected: 04/16/19 08:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.05 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			1000.05 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.56 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429535	05/22/19 06:21	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			999.56 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
 SDG: 6

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL

Client Sample ID: DUP-02

Lab Sample ID: 180-89131-10

Date Collected: 04/16/19 07:05

Matrix: Water

Date Received: 04/17/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.73 mL	1.0 g	426025	04/29/19 09:21		TAL SL
Total/NA	Analysis	9315		1			429536	05/22/19 06:23	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.73 mL	1.0 g	426029	04/29/19 09:49		TAL SL
Total/NA	Analysis	9320		1			428140	05/14/19 08:37	KLS	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Analysis	Ra226_Ra228		1			429550	05/23/19 08:47	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Analysis

CDR = Conrad Reuscher

KLS = Kody Saulters

SMP = Siobhan Perry

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: APMW-1R

Lab Sample ID: 180-89131-2

Date Collected: 04/15/19 13:45

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.38		0.327	0.447	1.00	0.0897	pCi/L	04/29/19 09:21	05/22/19 06:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		40 - 110					04/29/19 09:21	05/22/19 06:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.36		0.407	0.511	1.00	0.329	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	94.6		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.75		0.522	0.679	5.00	0.329	pCi/L		05/23/19 08:47	1

Client Sample ID: EB-01

Lab Sample ID: 180-89131-3

Date Collected: 04/15/19 13:10

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0141	U	0.0486	0.0486	1.00	0.0940	pCi/L	04/29/19 09:21	05/22/19 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.456		0.212	0.216	1.00	0.300	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	93.5		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: EB-01
Date Collected: 04/15/19 13:10
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-3
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.470		0.217	0.221	5.00	0.300	pCi/L		05/23/19 08:47	1

Client Sample ID: PZ-3
Date Collected: 04/15/19 11:30
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-4
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.453		0.124	0.131	1.00	0.0927	pCi/L	04/29/19 09:21	05/22/19 06:21	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	91.8		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.78		0.377	0.456	1.00	0.327	pCi/L	04/29/19 09:49	05/14/19 08:37	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	91.8		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	93.1		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.24		0.397	0.474	5.00	0.327	pCi/L		05/23/19 08:47	1

Client Sample ID: DUP-01
Date Collected: 04/15/19 10:30
Date Received: 04/17/19 08:40

Lab Sample ID: 180-89131-5
Matrix: Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.370		0.110	0.115	1.00	0.0747	pCi/L	04/29/19 09:21	05/22/19 06:21	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	93.2		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: DUP-01

Lab Sample ID: 180-89131-5

Date Collected: 04/15/19 10:30

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.95		0.378	0.465	1.00	0.312	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	94.2		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.32		0.394	0.479	5.00	0.312	pCi/L		05/23/19 08:47	1

Client Sample ID: FB-01

Lab Sample ID: 180-89131-7

Date Collected: 04/15/19 12:30

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0882		0.0618	0.0623	1.00	0.0806	pCi/L	04/29/19 09:21	05/22/19 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.115	U	0.188	0.188	1.00	0.318	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	91.6		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.204	U	0.198	0.198	5.00	0.318	pCi/L		05/23/19 08:47	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: PZ-1

Lab Sample ID: 180-89131-8

Date Collected: 04/16/19 08:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.0857	0.0877	1.00	0.0856	pCi/L	04/29/19 09:21	05/22/19 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.527		0.224	0.229	1.00	0.314	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	92.7		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.730		0.240	0.245	5.00	0.314	pCi/L		05/23/19 08:47	1

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.131		0.0784	0.0793	1.00	0.103	pCi/L	04/29/19 09:21	05/22/19 06:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					04/29/19 09:21	05/22/19 06:21	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.316		0.197	0.199	1.00	0.296	pCi/L	04/29/19 09:49	05/14/19 08:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	92.7		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Client Sample ID: PZ-2

Lab Sample ID: 180-89131-9

Date Collected: 04/16/19 09:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.447		0.212	0.214	5.00	0.296	pCi/L		05/23/19 08:47	1

Client Sample ID: DUP-02

Lab Sample ID: 180-89131-10

Date Collected: 04/16/19 07:05

Matrix: Water

Date Received: 04/17/19 08:40

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129		0.0786	0.0795	1.00	0.102	pCi/L	04/29/19 09:21	05/22/19 06:23	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	94.6		40 - 110					04/29/19 09:21	05/22/19 06:23	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.339	U	0.224	0.226	1.00	0.346	pCi/L	04/29/19 09:49	05/14/19 08:37	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	94.6		40 - 110					04/29/19 09:49	05/14/19 08:37	1
Y Carrier	92.0		40 - 110					04/29/19 09:49	05/14/19 08:37	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.468		0.237	0.240	5.00	0.346	pCi/L		05/23/19 08:47	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-426025/23-A
Matrix: Water
Analysis Batch: 429534

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 426025

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05880	U	0.0569	0.0571	1.00	0.0858	pCi/L	04/29/19 09:21	05/22/19 10:11	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	94.4		40 - 110			04/29/19 09:21	05/22/19 10:11	1		

Lab Sample ID: LCS 160-426025/1-A
Matrix: Water
Analysis Batch: 429534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 426025

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.917		1.05	1.00	0.109	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.5		40 - 110						

Lab Sample ID: LCSD 160-426025/2-A
Matrix: Water
Analysis Batch: 429534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 426025

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	9.556		1.01	1.00	0.0957	pCi/L	84	75 - 125	0.18	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	96.9		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-426029/23-A
Matrix: Water
Analysis Batch: 428139

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 426029

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3468	U	0.270	0.272	1.00	0.430	pCi/L	04/29/19 09:49	05/14/19 08:41	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	94.4		40 - 110			04/29/19 09:49	05/14/19 08:41	1		
Y Carrier	90.1		40 - 110			04/29/19 09:49	05/14/19 08:41	1		

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QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
 SDG: 6

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-426029/1-A
Matrix: Water
Analysis Batch: 428140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 426029

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.21	10.47		1.18	1.00	0.381	pCi/L	114	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.5		40 - 110
Y Carrier	92.0		40 - 110

Lab Sample ID: LCSD 160-426029/2-A
Matrix: Water
Analysis Batch: 428140

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 426029

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.21	9.702		1.11	1.00	0.355	pCi/L	105	75 - 125	0.34	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	96.9		40 - 110
Y Carrier	86.7		40 - 110

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89131-6
SDG: 6

Rad

Prep Batch: 426025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	PrecSep-21	
180-89131-3	EB-01	Total/NA	Water	PrecSep-21	
180-89131-4	PZ-3	Total/NA	Water	PrecSep-21	
180-89131-5	DUP-01	Total/NA	Water	PrecSep-21	
180-89131-7	FB-01	Total/NA	Water	PrecSep-21	
180-89131-8	PZ-1	Total/NA	Water	PrecSep-21	
180-89131-9	PZ-2	Total/NA	Water	PrecSep-21	
180-89131-10	DUP-02	Total/NA	Water	PrecSep-21	

Prep Batch: 426029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89131-2	APMW-1R	Total/NA	Water	PrecSep_0	
180-89131-3	EB-01	Total/NA	Water	PrecSep_0	
180-89131-4	PZ-3	Total/NA	Water	PrecSep_0	
180-89131-5	DUP-01	Total/NA	Water	PrecSep_0	
180-89131-7	FB-01	Total/NA	Water	PrecSep_0	
180-89131-8	PZ-1	Total/NA	Water	PrecSep_0	
180-89131-9	PZ-2	Total/NA	Water	PrecSep_0	
180-89131-10	DUP-02	Total/NA	Water	PrecSep_0	

Chain of Custody Record

684-Atlanta

Client Information		Sampler: Philip Evans		Lab PM: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-50459-10589.1	
Client Contact: Corey Ladner		Phone: 850-336-0192		E-Mail: veronica.bortot@testamericainc.com		Page: 1 of 1		Job #:	
Company: Southern Company		Due Date Requested:		Analysis Requested		Total Number of Containers		Preservation Codes:	
Address: PO BOX 2641 GSC8		TAT Requested (days):		Field Filtered Sample (Yes or No)		9315 Ra226, 9320 Ra228		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - EDA Z - other (specify)	
City: Birmingham		PO #: SCS10382606		620, 7470A		2540C_Calcd, 300_ORGFM_28D		Other:	
State, Zip: AL, 35291		WO #:		Appendix 3		Appendix 4			
Phone:		Project #: 18020186		D		N		D	
Email: X2CTLADN@SOUTHERNCO.COM		SSOW#:		X		X		X	
Project Name: CCR - Plant Watson		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=Water, S=solid, O=Other)	
Site:		4/15/19		1530		G		Water	
Sample Identification		APMw-1							
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Polson B	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological					
Empty Kit Relinquished by:		Date/Time: 4/16/19 1215		Date/Time:		Date/Time:		Date/Time:	
Relinquished by: <i>[Signature]</i>		Company: POH		Received by: <i>[Signature]</i>		Date/Time: 4-17-19		Company: Company	
Relinquished by:		Company:		Received by:		Date/Time: 890		Company:	
Relinquished by:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Special Instructions/QC Requirements:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
								<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	



Chain of Custody Record



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Sampler: Philip Evans Lab PM: Bortot, Veronica Phone: 850-336-0192 E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested Field Filtered Sample (Yes or No)	
Sample Identification APMW-1R EB-01		Total Number of Containers	
Sample Date 4/15/19 4/15/19	Sample Time 1345 1310	Sample Type (C=Comp, G=grab) G G	Matrix (W=Water, S=solid, O=water, A=Air) Water Water
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by:		Special Instructions/QC Requirements:	
Relinquished by:		Method of Shipment:	
Relinquished by:		Date/Time: 4-17-19 Date/Time: 8:40 Date/Time:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

681-Atlanta



Environment Testing
TestAmerica

Client Information
 Client Contact: Philip Evans
 Phone: 850-336-0192
 Lab PM: Bortot, Veronica
 E-Mail: veronica.bortot@testamericainc.com

Company: Southern Company
 Address: PO BOX 2641 GSC8
 City: Birmingham
 State, Zip: AL, 35291
 Phone:
 PO #: SCS10382606
 WO #:
 Email: X2CTLADN@SOUTHERNCO.COM
 Project Name: CCR - Plant Watson
 Site:

Due Date Requested:
 TAT Requested (days):
 Field Filtered Sample (Yes or No) [X] []

Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=soil, O=water, BT=Tissue, AS=Air)	Preservation Code:	D	N	D	Field Filtered Sample (Yes or No)	Special Instructions/Note:	Analysis Requested
RZ-3	4/15/19	1130	G	Water					X	Appendix 3	M - Hexane N - None O - ASNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:
Dp-01	4/15/19	1030	G	Water					X	Appendix 4	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - ASNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 L - EDA
 Other:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [Signature]
 Relinquished by: [Signature]
 Relinquished by: [Signature]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Method of Shipment:
 Received by: [Signature] Date/Time: 4/16/19 1215 Company: PDA
 Received by: [Signature] Date/Time: 840 Company: [Signature]
 Received by: [Signature] Date/Time: Company:

Custody Seals Intact: Yes No Partial None
 Cooler Temperature(s) °C and Other Remarks:



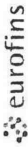
Chain of Custody Record



Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 850-336-0192 Carrier Tracking No(s): _____		COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #: _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSOW#: _____		Analysis Requested Total Number of Containers: _____			
Sample Identification Sample ID: PZ-4 Sample ID: FB-01		Sample Date 4/15/19 4/15/19	Sample Time 1245 1230	Sample Type (C=Comp, G=grab) G G	Matrix (Water, Sewage, Stormwater, Other) (BR, Tissue, A, Air) Water Water Water Water Water Water Water
Field Filtered Sample (Yes or No)		D N D 6020, 7470A 2540C_Calcd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Method of Shipment: _____ Date/Time: 4/16/19 1215 Date/Time: _____ Date/Time: _____ Date/Time: _____			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			



Chain of Custody Record



684-Atlanta

Client Information Client Contact: Philip Evans Phone: 850-336-0192 Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:			Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): COC No: 180-50459-10589.1 Page: Page 1 of 1 Job #:		
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SSOW#:			Analysis Requested Total Number of Containers:		
Sample Identification Sample ID: PZ-1 PZ-2 Dup-02			Field Filtered Sample (Yes or No): D N D 6020, 7470A 2540C_Calcd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228 Appendix 3 Appendix 4		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/Note:		
Empty Kit Relinquished by: Relinquished by: Relinquished by: Relinquished by:			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:		
Date/Time: 4/16/19 0805 Date/Time: 4/16/19 0905 Date/Time: 4/16/19 0705			Date/Time: 4-12-19 Date/Time: 890 Date/Time:		
Company: Southern Company Company: Southern Company Company: Southern Company			Company: Southern Company Company: Southern Company Company: Southern Company		
Custody Seals Intact: Δ Yes Δ No			Cooler Temperature(s) °C and Other Remarks:		



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- 2
- 3
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180-99131 Waybill



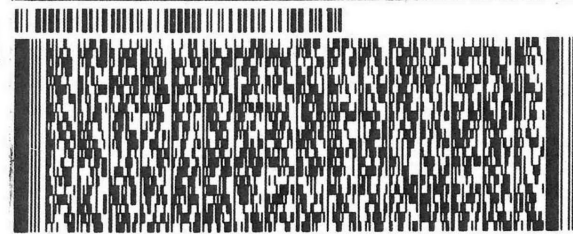
ORIGIN ID:BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

SHIP DATE: 16APR19
 ACTWGT: 64.50 LB
 CAD: 006993800/SSFE2002
 DIMS: 24x13x14 IN
 BILL THIRD PARTY

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15283 *15238*

(412) 963-7068 REF: DEPT:
 INU: PO:



2 of 2 **WED - 17 APR 10:30A**
 MPS# **7866 8855 8053** **PRIORITY OVERNIGHT**
 0263

FedEx 2 of 2 **THU - 18 APR 10:30A**
 MPS# **7866 8855 8053** **PRIORITY OVERNIGHT**
 0263

65 AGCA **15238**
 PA-US
PIT

Uncorrected temp 25 °C
 Thermometer ID 10

CF 0 Initials JB

PT-WI-SR-001 effective 11/8/18



FID 106442 17APR19 PITA 553C1/D7E5/0C8A

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- 12
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ORIGIN ID:BIXA (850) 336-0192
 RICK HAGENDORFER
 RDH
 5720 DOVE DRIVE
 PACE, FL 32571
 UNITED STATES US

NEW
 10:30
 8042
 04 17

TO **SAMPLE RECEIVING**
TEST AMERICA PITTSBURGH
301 ALPHA DR

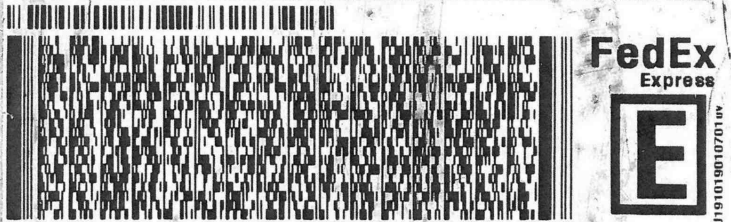
PITTSBURGH PA 15283

(412) 963-7068
 TRU:
 PO:

REF:

DEPT:

15238



1 of 2
 TRK# 7866 8855 8042

WED - 17 APR 10:30A

FedEx
 TRK#
 0201 7866 8855 8042

WED - 17 APR 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238
 PA-US
PIT

Uncorrected temp	28	°C
Thermometer ID	10	
CF	0	Initials
		TS

PT-WI-SR-001 effective 11/9/18

FID 1

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-6

SDG Number: 6

Login Number: 89131

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89131-6

SDG Number: 6

Login Number: 89131

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 04/24/19 09:36 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89714-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 2:11:25 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
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Have a Question?



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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Job ID: 180-89714-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89714-1

Revised : to add field pH

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): PZ-2 (180-89714-2). The container labels list PZ-3, while the COC lists PZ-2. The id on the COC was used.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The continuing calibration blank (CCB) for analytical batch 400-441084 contained Lead above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-440942 and analytical batch 400-441084 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 7470A: The matrix spike duplicate (MSD) recoveries for preparation batch 400-440417 and analytical batch 400-440709 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89714-1	PZ-1	Water	05/03/19 07:26	05/04/19 09:15	
180-89714-2	PZ-2	Water	05/03/19 08:33	05/04/19 09:15	
180-89714-3	DUP-02	Water	05/03/19 06:26	05/04/19 09:15	
180-89714-4	EB-1	Water	05/03/19 08:50	05/04/19 09:15	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-89714-1

Date Collected: 05/03/19 07:26

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			277902	05/07/19 06:31	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 19:49	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5			441268	05/17/19 10:02	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 14:51	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/03/19 07:26	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			277902	05/07/19 06:46	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 20:09	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 14:53	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/03/19 08:33	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-02

Lab Sample ID: 180-89714-3

Date Collected: 05/03/19 06:26

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			277902	05/07/19 07:01	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 20:13	DRE	TAL PEN
Instrument ID: ICPMS7700										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Client Sample ID: DUP-02

Lab Sample ID: 180-89714-3

Date Collected: 05/03/19 06:26

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			40 mL	40 mL	440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 14:55	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: EB-1

Lab Sample ID: 180-89714-4

Date Collected: 05/03/19 08:50

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			277902	05/07/19 06:15	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 20:17	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 14:58	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

FDS = Sampler Field

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-89714-1

Date Collected: 05/03/19 07:26

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		1.0	0.71	mg/L			05/07/19 06:31	1
Fluoride	0.042	J	0.20	0.026	mg/L			05/07/19 06:31	1
Sulfate	1.1		1.0	0.38	mg/L			05/07/19 06:31	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 19:49	5
Boron	<0.021		0.050	0.021	mg/L		05/15/19 10:30	05/15/19 19:49	5
Barium	0.074		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 19:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 19:49	5
Calcium	12		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 19:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 19:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 19:49	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 19:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 19:49	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 19:49	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 19:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 19:49	5
Lithium	0.010		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 19:49	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<0.0011	F1 F2	0.0025	0.0011	mg/L		05/15/19 10:30	05/17/19 10:02	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 14:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	91		10	10	mg/L			05/07/19 10:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.37				SU			05/03/19 07:26	1

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			05/07/19 06:46	1
Fluoride	0.058	J	0.20	0.026	mg/L			05/07/19 06:46	1
Sulfate	1.3		1.0	0.38	mg/L			05/07/19 06:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 20:09	5
Boron	0.021	J	0.050	0.021	mg/L		05/15/19 10:30	05/15/19 20:09	5
Barium	0.076		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 20:09	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:09	5
Calcium	13		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 20:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 20:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 20:09	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 20:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 20:09	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 20:09	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 20:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 20:09	5
Lithium	0.015		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 20:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 14:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			05/07/19 10:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.33				SU			05/03/19 08:33	1

Client Sample ID: DUP-02

Lab Sample ID: 180-89714-3

Date Collected: 05/03/19 06:26

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		1.0	0.71	mg/L			05/07/19 07:01	1
Fluoride	0.037	J	0.20	0.026	mg/L			05/07/19 07:01	1
Sulfate	0.98	J	1.0	0.38	mg/L			05/07/19 07:01	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00056	J	0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 20:13	5
Boron	<0.021		0.050	0.021	mg/L		05/15/19 10:30	05/15/19 20:13	5
Barium	0.076		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 20:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:13	5
Calcium	13		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 20:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 20:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 20:13	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 20:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 20:13	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 20:13	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 20:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 20:13	5
Lithium	0.011		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 20:13	5

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Client Sample ID: DUP-02
Date Collected: 05/03/19 06:26
Date Received: 05/04/19 09:15

Lab Sample ID: 180-89714-3
Matrix: Water

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		10	10	mg/L			05/07/19 10:52	1

Client Sample ID: EB-1
Date Collected: 05/03/19 08:50
Date Received: 05/04/19 09:15

Lab Sample ID: 180-89714-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/07/19 06:15	1
Fluoride	<0.026		0.20	0.026	mg/L			05/07/19 06:15	1
Sulfate	<0.38		1.0	0.38	mg/L			05/07/19 06:15	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 20:17	5
Boron	<0.021		0.050	0.021	mg/L		05/15/19 10:30	05/15/19 20:17	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 20:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:17	5
Calcium	<0.13		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 20:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 20:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 20:17	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 20:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 20:17	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 20:17	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 20:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 20:17	5
Lithium	0.0013	J	0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 20:17	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/07/19 10:52	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-277902/6
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/07/19 05:13	1
Fluoride	<0.026		0.20	0.026	mg/L			05/07/19 05:13	1
Sulfate	<0.38		1.0	0.38	mg/L			05/07/19 05:13	1

Lab Sample ID: LCS 180-277902/5
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Fluoride	1.25	1.35		mg/L		108	90 - 110
Sulfate	25.0	26.5		mg/L		106	90 - 110

Lab Sample ID: 180-89714-3 MS
Matrix: Water
Analysis Batch: 277902

Client Sample ID: DUP-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.3		25.0	35.7		mg/L		106	80 - 120
Fluoride	0.037	J	1.25	1.15		mg/L		89	80 - 120
Sulfate	0.98	J	25.0	27.3		mg/L		105	80 - 120

Lab Sample ID: 180-89714-3 MSD
Matrix: Water
Analysis Batch: 277902

Client Sample ID: DUP-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.3		25.0	35.8		mg/L		106	80 - 120	0	20
Fluoride	0.037	J	1.25	1.19		mg/L		92	80 - 120	3	20
Sulfate	0.98	J	25.0	27.5		mg/L		106	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-440942/1-A ^5
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 18:05	5
Boron	<0.021		0.050	0.021	mg/L		05/15/19 10:30	05/15/19 18:05	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 18:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 18:05	5
Calcium	<0.13		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 18:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 18:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 18:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 18:05	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 18:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 18:05	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 18:05	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 18:05	5

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QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-440942/1-A ^5
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 18:05	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 18:05	5

Lab Sample ID: LCS 400-440942/2-A
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0487		mg/L		97	80 - 120
Boron	0.100	0.0968		mg/L		97	80 - 120
Barium	0.0500	0.0477		mg/L		95	80 - 120
Beryllium	0.0500	0.0487		mg/L		97	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Cadmium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0495		mg/L		99	80 - 120
Chromium	0.0500	0.0482		mg/L		96	80 - 120
Molybdenum	0.0500	0.0480		mg/L		96	80 - 120
Lead	0.0500	0.0507		mg/L		101	80 - 120
Antimony	0.0500	0.0460		mg/L		92	80 - 120
Selenium	0.0500	0.0482		mg/L		96	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Lithium	0.0500	0.0509		mg/L		102	80 - 120

Lab Sample ID: 180-89714-1 MS
Matrix: Water
Analysis Batch: 441084

Client Sample ID: PZ-1
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	<0.00046		0.0500	0.0504		mg/L		101	75 - 125
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125
Barium	0.071		0.0500	0.126		mg/L		110	75 - 125
Beryllium	<0.00034		0.0500	0.0469		mg/L		94	75 - 125
Calcium	12		5.00	17.6		mg/L		106	75 - 125
Cadmium	<0.00034		0.0500	0.0529		mg/L		106	75 - 125
Cobalt	<0.00040		0.0500	0.0506		mg/L		101	75 - 125
Chromium	<0.0011	F1 F2	0.0500	0.0481		mg/L		96	75 - 125
Molybdenum	<0.0020		0.0500	0.0481		mg/L		96	75 - 125
Lead	<0.00035		0.0500	0.0499		mg/L		100	75 - 125
Antimony	<0.0010		0.0500	0.0466		mg/L		93	75 - 125
Selenium	<0.00071		0.0500	0.0533		mg/L		107	75 - 125
Thallium	<0.000085		0.0100	0.00998		mg/L		100	75 - 125
Lithium	0.0099		0.0500	0.0629		mg/L		106	75 - 125

Lab Sample ID: 180-89714-1 MSD
Matrix: Water
Analysis Batch: 441084

Client Sample ID: PZ-1
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	<0.00046		0.0500	0.0493		mg/L		99	75 - 125	2	20

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QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-89714-1 MSD
Matrix: Water
Analysis Batch: 441084

Client Sample ID: PZ-1
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.021		0.100	0.108		mg/L		108	75 - 125	7	20
Barium	0.071		0.0500	0.122		mg/L		103	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0464		mg/L		93	75 - 125	1	20
Calcium	12		5.00	17.8		mg/L		110	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0516		mg/L		103	75 - 125	3	20
Cobalt	<0.00040		0.0500	0.0495		mg/L		99	75 - 125	2	20
Chromium	<0.0011	F1 F2	0.0500	0.153	F1 F2	mg/L		307	75 - 125	104	20
Molybdenum	<0.0020		0.0500	0.0460		mg/L		92	75 - 125	4	20
Lead	<0.00035		0.0500	0.0499		mg/L		100	75 - 125	0	20
Antimony	<0.0010		0.0500	0.0447		mg/L		89	75 - 125	4	20
Selenium	<0.00071		0.0500	0.0453		mg/L		91	75 - 125	16	20
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125	1	20
Lithium	0.0099		0.0500	0.0598		mg/L		100	75 - 125	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-440417/14-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 10:11	05/13/19 14:19	1

Lab Sample ID: LCS 400-440417/15-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-277972/2
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/07/19 10:52	1

Lab Sample ID: LCS 180-277972/1
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	186		mg/L		93	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
 SDG: 1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 180-89714-2 DU
Matrix: Water
Analysis Batch: 277972

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	130		132		mg/L	-	3	10

Lab Sample ID: 180-89714-3 DU
Matrix: Water
Analysis Batch: 277972

Client Sample ID: DUP-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	110		104		mg/L	-	7	10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

HPLC/IC

Analysis Batch: 277902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	300.0	
180-89714-2	PZ-2	Total/NA	Water	300.0	
180-89714-3	DUP-02	Total/NA	Water	300.0	
180-89714-4	EB-1	Total/NA	Water	300.0	
MB 180-277902/6	Method Blank	Total/NA	Water	300.0	
LCS 180-277902/5	Lab Control Sample	Total/NA	Water	300.0	
180-89714-3 MS	DUP-02	Total/NA	Water	300.0	
180-89714-3 MSD	DUP-02	Total/NA	Water	300.0	

Metals

Prep Batch: 440417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	7470A	
180-89714-2	PZ-2	Total/NA	Water	7470A	
180-89714-3	DUP-02	Total/NA	Water	7470A	
180-89714-4	EB-1	Total/NA	Water	7470A	
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 440709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	7470A	440417
180-89714-2	PZ-2	Total/NA	Water	7470A	440417
180-89714-3	DUP-02	Total/NA	Water	7470A	440417
180-89714-4	EB-1	Total/NA	Water	7470A	440417
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	440417
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	440417

Prep Batch: 440942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total Recoverable	Water	3005A	
180-89714-1 - RA	PZ-1	Total Recoverable	Water	3005A	
180-89714-2	PZ-2	Total Recoverable	Water	3005A	
180-89714-3	DUP-02	Total Recoverable	Water	3005A	
180-89714-4	EB-1	Total Recoverable	Water	3005A	
MB 400-440942/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-440942/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-89714-1 MS	PZ-1	Total Recoverable	Water	3005A	
180-89714-1 MSD	PZ-1	Total Recoverable	Water	3005A	

Analysis Batch: 441084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total Recoverable	Water	6020	440942
180-89714-2	PZ-2	Total Recoverable	Water	6020	440942
180-89714-3	DUP-02	Total Recoverable	Water	6020	440942
180-89714-4	EB-1	Total Recoverable	Water	6020	440942
MB 400-440942/1-A ^5	Method Blank	Total Recoverable	Water	6020	440942
LCS 400-440942/2-A	Lab Control Sample	Total Recoverable	Water	6020	440942
180-89714-1 MS	PZ-1	Total Recoverable	Water	6020	440942
180-89714-1 MSD	PZ-1	Total Recoverable	Water	6020	440942

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-1
SDG: 1

Metals

Analysis Batch: 441268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1 - RA	PZ-1	Total Recoverable	Water	6020	440942

General Chemistry

Analysis Batch: 277972

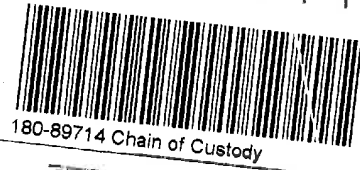
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	SM 2540C	
180-89714-2	PZ-2	Total/NA	Water	SM 2540C	
180-89714-3	DUP-02	Total/NA	Water	SM 2540C	
180-89714-4	EB-1	Total/NA	Water	SM 2540C	
MB 180-277972/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-277972/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-89714-2 DU	PZ-2	Total/NA	Water	SM 2540C	
180-89714-3 DU	DUP-02	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	Field Sampling	
180-89714-2	PZ-2	Total/NA	Water	Field Sampling	

Client Information		Lab P/N: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-50460-10589.2	
Client Contact: Corey Ladner		E-Mail: veronica.bortot@testamericainc.com		Page: 2		Page: 2	
Company: Southern Company		Phone: 850 380 3458		Job #:			
Address: PO BOX 2641 GSC8		City: Birmingham		State, Zip: AL, 35291		Phone:	
Email: X2CTLADN@SOUTHERNCO.COM		Project #: 18020186		SSOW#:			
Site: CCR - Plant Watson		Due Date Requested:		TAT Requested (days):			
PO #: SCS10382606		Sample Date		Sample Time		Sample Type	
Matrix (W=water, S=solid, O=wastewater, BT=Titration, A=As)		Matrix		Sample Type		Sample Date	
Sample Identification		PZ-1		5/3/19 0726		G	
		PZ-2		5/3/19 0833		G	
		DUP-02		5/3/19 0626		G	
		ER-1		5/3/19 0850		G	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: [Signature]		Date/Time: 5/3/19 1100		Company: [Signature]		Date/Time: 5-4-19	
Relinquished by:		Date/Time:		Company:		Date/Time: 9/15	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			



- Preservation Codes:**
- A - HCL
 - B - NaOH
 - C - Zn Acetate
 - D - Nitric Acid
 - E - NaHCO4
 - F - MeOH
 - G - Amchlor
 - H - Ascorbic Acid
 - I - Ica
 - J - DI Water
 - K - EDTA
 - L - EDA
 - M - Hexane
 - N - None
 - O - AsNaO2
 - P - Na2O4S
 - Q - Na2SO3
 - R - Na2S2O3
 - S - H2SO4
 - T - TSP Dodecahydrate
 - U - Acetone
 - V - MCAA
 - W - pH 4-5
 - Z - other (specify)

Field Filled Sample (Yes or No)	Field Filtered Sample (Yes or No)	9315_Ra226, 9320_Ra228	2540C_Calcd, 300_ORGFM_28D	6020_7470A	Special
X	X	X	X	X	
X	X	X	X	X	
X	X	X	X	X	
X	X	X	X	X	

Do Not Lift Using This Tag

151967 REV 7/08 RRD

Delivery



180-89714 Waybill

SDR

FedEx
Express

ORIGIN ID:MULA (050) 136 0192
RICK HAGENDORFLER
RDH:
5720 DOVE DR

SHIP DATE: 22APR19
ACTWGT: 20.00 LB MAX
CAD: 859116/CAFE3211

PLACE, FL 32571
UNITED STATES US

TO **SAMPLE RECEIVING**
EUROFINS TESTAMERICA PITTS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068

REF:

DEPT:

INV:
PO:

FedEx
TRK# 4651 0081 2875
0221

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

15238
PA-US
PIT

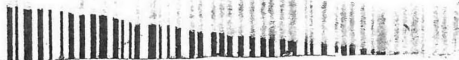
Uncorrected temp
Thermometer ID 4.9 °C

CF 0 Initials VO
MD

PT-WI-SR-001 effective 11/8/18

FID 295446

#285446 05/03 565J1/D66C/23AD



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica	State of Origin: Georgia	180-362184.1					
Company: TestAmerica Laboratories, Inc.		E-Mail: veronica.bortot@testamericainc.com		Page: 1 of 1	Job #: 180-89714-1					
Address: 3355 McLemore Drive, Pensacola State, Zip: FL, 32514		Due Date Requested: 5/16/2019	Analysis Requested							
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		TAT Requested (days):	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaHSO4 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:							
Email:		PO #:	Preservation Codes:							
Project #: CCR - Plant Watson		WO #:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA							
Site:		Project #: 18020186	Total Number of Containers							
		SSOW#:	Other:							
			Special Instructions/Note:							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7470A/7470A_Prep	SAAsBa,BeCd,Cr,Cu,PbNi,Se,AgTiV	6020/3005A (MOD)	7470A/7470A_Prep
PZ-1 (180-89714-1)	5/3/19	07:26 Eastern	Water	Water	X	X				1
PZ-2 (180-89714-2)	5/3/19	08:33 Eastern	Water	Water	X	X				1
DUP-02 (180-89714-3)	5/3/19	06:26 Eastern	Water	Water	X	X				1
EB-1 (180-89714-4)	5/3/19	08:50 Eastern	Water	Water	X	X				1
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>										
Possible Hazard Identification										
Unconfirmed										
Deliverable Requested: I, II, III, IV, Other (specify)										
Primary Deliverable Rank: 2										
Empty Kit Relinquished by:										
Date:										
Relinquished by:										
Date/Time:										
Relinquished by:										
Date/Time:										
Relinquished by:										
Date/Time:										
Custody Seals Intact: Δ Yes Δ No										
Custody Seal No.:										
Cooler Temperature(s) °C and Other Remarks: 3.5°C IRL 8										
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements:										
Method of Shipment:										
Received by: <i>Veronica Bortot</i>										
Date/Time: 5-19-19 900										
Company: TAA										
Received by:										
Date/Time:										
Company:										
Received by:										
Date/Time:										
Company:										



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89714-1

SDG Number: 1

Login Number: 89714

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89714-1

SDG Number: 1

Login Number: 89714

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/08/19 05:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89714-2
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
7/19/2019 4:32:50 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



Table of Contents

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Job ID: 180-89714-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89714-2

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-

The Ra-226 matrix spike (MS) is recovering (73%) outside of the control limits of 75-138%. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The data have been reported with this narrative.

EB-1 (180-89714-4), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-429215

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB-1 (180-89714-4), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 9315: Ra-226 Prep Batch 160-429255

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-1 (180-89714-1), PZ-2 (180-89714-2), DUP-02 (180-89714-3), (LCS 160-429255/1-A), (MB 160-429255/24-A), (310-153330-D-5-B), (310-153330-C-5-C MS), (310-153330-C-5-D MSD), (400-168971-A-4-C) and (400-168971-A-4-D DU)

Method(s) 904.0, 9320: Radium-228 Prep Batch 160-429223

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

EB-1 (180-89714-4), (LCS 160-429223/1-A), (MB 160-429223/24-A), (310-153734-D-7-B), (310-153734-C-7-C MS) and (310-153734-C-7-D MSD)

Method(s) 9320: Ra-228 Prep Batch 160-429269

The detector used to count the MS failed its beta source for the day. This excursion does not directly affect client samples. The LCS, MS

Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Job ID: 180-89714-2 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

and MSD are all were within QC limits demonstrating acceptable method performance. The data is reported per client request. PZ-1 (180-89714-1), PZ-2 (180-89714-2), DUP-02 (180-89714-3), (LCS 160-429269/1-A), (MB 160-429269/24-A), (310-153330-D-5-C), (310-153330-C-5-E MS), (310-153330-C-5-F MSD), (400-168971-A-4-E) and (400-168971-A-4-F DU)

Method(s) 9320: Ra-228 Prep Batch 160-429269

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-1 (180-89714-1), PZ-2 (180-89714-2), DUP-02 (180-89714-3), (LCS 160-429269/1-A), (MB 160-429269/24-A), (310-153330-D-5-C), (310-153330-C-5-E MS), (310-153330-C-5-F MSD), (400-168971-A-4-E) and (400-168971-A-4-F DU)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
ANAB	DOE		L2305.01	04-06-22
Arizona	State		AZ0813	12-08-19
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-20
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-20
Florida	NELAP		E87689	06-30-20
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-20
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19 *
Missouri	State Program	7	780	06-30-19 *
Nevada	State Program	9	MO000542018-1	07-31-19 *
New Jersey	NELAP	2	MO002	06-30-20
New York	NELAP	2	11616	03-31-20
New York	NELAP		11616	04-01-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19 *
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19 *
Texas	NELAP	6	T104704193-18-13	07-31-19 *
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19 *
Virginia	NELAP	3	460230	06-14-20
Virginia	NELAP		10310	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89714-1	PZ-1	Water	05/03/19 07:26	05/04/19 09:15	
180-89714-2	PZ-2	Water	05/03/19 08:33	05/04/19 09:15	
180-89714-3	DUP-02	Water	05/03/19 06:26	05/04/19 09:15	
180-89714-4	EB-1	Water	05/03/19 08:50	05/04/19 09:15	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-89714-1

Date Collected: 05/03/19 07:26

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.26 mL	1.0 g	429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1			434541	07/11/19 21:44	CDR	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.26 mL	1.0 g	429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1			434009	07/08/19 13:41	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			434902	07/16/19 08:14	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.82 mL	1.0 g	429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1			434541	07/11/19 21:44	CDR	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.82 mL	1.0 g	429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1			434009	07/08/19 13:41	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			434902	07/16/19 08:14	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-02

Lab Sample ID: 180-89714-3

Date Collected: 05/03/19 06:26

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.56 mL	1.0 g	429255	05/21/19 15:49	KAW	TAL SL
Total/NA	Analysis	9315		1			434541	07/11/19 21:44	CDR	TAL SL
Instrument ID: GFPCPROTEAN										
Total/NA	Prep	PrecSep_0			1000.56 mL	1.0 g	429269	05/21/19 17:16	ORM	TAL SL
Total/NA	Analysis	9320		1			434009	07/08/19 13:42	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			434902	07/16/19 08:14	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: EB-1

Lab Sample ID: 180-89714-4

Date Collected: 05/03/19 08:50

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.35 mL	1.0 g	429215	05/21/19 09:05	ORM	TAL SL
Total/NA	Analysis	9315		1			432305	06/20/19 09:52	CDR	TAL SL
Instrument ID: GFPCORANGE										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
 SDG: 1

Client Sample ID: EB-1

Lab Sample ID: 180-89714-4

Date Collected: 05/03/19 08:50

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1000.35 mL	1.0 g	429223	05/21/19 10:02	ORM	TAL SL
Total/NA	Analysis	9320		1			431911	06/17/19 15:56	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			434902	07/16/19 08:14	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

KAW = Kayla Walker

ORM = Octavia Moore

Batch Type: Analysis

CDR = Conrad Reuscher

SMP = Siobhan Perry

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-89714-1

Date Collected: 05/03/19 07:26

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.123	0.124	1.00	0.181	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.159	U	0.220	0.220	1.00	0.367	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	87.5		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.320	U	0.252	0.253	5.00	0.367	pCi/L		07/16/19 08:14	1

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.269		0.121	0.124	1.00	0.127	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0886	U	0.205	0.205	1.00	0.353	pCi/L	05/21/19 17:16	07/08/19 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/21/19 17:16	07/08/19 13:41	1
Y Carrier	83.0		40 - 110					05/21/19 17:16	07/08/19 13:41	1

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Client Sample ID: PZ-2

Lab Sample ID: 180-89714-2

Date Collected: 05/03/19 08:33

Matrix: Water

Date Received: 05/04/19 09:15

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.357		0.238	0.240	5.00	0.353	pCi/L		07/16/19 08:14	1

Client Sample ID: DUP-02

Lab Sample ID: 180-89714-3

Date Collected: 05/03/19 06:26

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.189		0.127	0.128	1.00	0.178	pCi/L	05/21/19 15:49	07/11/19 21:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					05/21/19 15:49	07/11/19 21:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.136	U	0.207	0.207	1.00	0.349	pCi/L	05/21/19 17:16	07/08/19 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					05/21/19 17:16	07/08/19 13:42	1
Y Carrier	86.0		40 - 110					05/21/19 17:16	07/08/19 13:42	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.325	U	0.243	0.243	5.00	0.349	pCi/L		07/16/19 08:14	1

Client Sample ID: EB-1

Lab Sample ID: 180-89714-4

Date Collected: 05/03/19 08:50

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00985	U	0.0831	0.0831	1.00	0.174	pCi/L	05/21/19 09:05	06/20/19 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/19 09:05	06/20/19 09:52	1

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
 SDG: 1

Client Sample ID: EB-1

Lab Sample ID: 180-89714-4

Date Collected: 05/03/19 08:50

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0255	U	0.273	0.273	1.00	0.488	pCi/L	05/21/19 10:02	06/17/19 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/19 10:02	06/17/19 15:56	1
Y Carrier	81.1		40 - 110					05/21/19 10:02	06/17/19 15:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0354	U	0.285	0.285	5.00	0.488	pCi/L		07/16/19 08:14	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-429215/24-A
Matrix: Water
Analysis Batch: 432306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429215

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05470	U	0.0932	0.0933	1.00	0.164	pCi/L	05/21/19 09:05	06/20/19 13:22	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					05/21/19 09:05	06/20/19 13:22	1

Lab Sample ID: LCS 160-429215/1-A
Matrix: Water
Analysis Batch: 432305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429215

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.497		1.06	1.00	0.168	pCi/L	84	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	105		40 - 110						

Lab Sample ID: MB 160-429255/24-A
Matrix: Water
Analysis Batch: 434526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429255

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02448	U	0.0674	0.0675	1.00	0.128	pCi/L	05/21/19 15:49	07/11/19 21:46	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					05/21/19 15:49	07/11/19 21:46	1

Lab Sample ID: LCS 160-429255/1-A
Matrix: Water
Analysis Batch: 434543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429255

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.898		1.15	1.00	0.186	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	87.6		40 - 110						

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-429223/24-A
Matrix: Water
Analysis Batch: 431881

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429223

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1432	U	0.212	0.212	1.00	0.356	pCi/L	05/21/19 10:02	06/17/19 16:07	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
SDG: 1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110	05/21/19 10:02	06/17/19 16:07	1
Y Carrier	82.6		40 - 110	05/21/19 10:02	06/17/19 16:07	1

Lab Sample ID: LCS 160-429223/1-A
Matrix: Water
Analysis Batch: 431911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429223

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.11	8.016		1.07	1.00	0.646	pCi/L	88	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	83.7		40 - 110

Lab Sample ID: MB 160-429269/24-A
Matrix: Water
Analysis Batch: 434009

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429269

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.03429	U	0.208	0.208	1.00	0.367	pCi/L	05/21/19 17:16	07/08/19 13:42	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	05/21/19 17:16	07/08/19 13:42	1
Y Carrier	83.7		40 - 110	05/21/19 17:16	07/08/19 13:42	1

Lab Sample ID: LCS 160-429269/1-A
Matrix: Water
Analysis Batch: 434047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429269

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.04	8.838		1.07	1.00	0.424	pCi/L	98	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.6		40 - 110
Y Carrier	83.4		40 - 110

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89714-2
 SDG: 1

Rad

Prep Batch: 429215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-4	EB-1	Total/NA	Water	PrecSep-21	
MB 160-429215/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-429215/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 429223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-4	EB-1	Total/NA	Water	PrecSep_0	
MB 160-429223/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429223/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

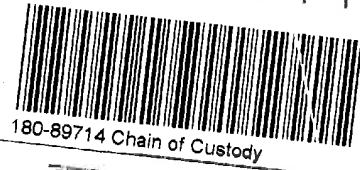
Prep Batch: 429255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	PrecSep-21	
180-89714-2	PZ-2	Total/NA	Water	PrecSep-21	
180-89714-3	DUP-02	Total/NA	Water	PrecSep-21	
MB 160-429255/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-429255/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 429269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89714-1	PZ-1	Total/NA	Water	PrecSep_0	
180-89714-2	PZ-2	Total/NA	Water	PrecSep_0	
180-89714-3	DUP-02	Total/NA	Water	PrecSep_0	
MB 160-429269/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429269/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Information		Lab P/N: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-50460-10589.2	
Client Contact: Corey Ladner		E-Mail: veronica.bortot@testamericainc.com		Page: 2		Page: 2	
Company: Southern Company		Phone: 850 380 3458		Job #:			
Address: PO BOX 2641 GSC8		City: Birmingham		State, Zip: AL, 35291		Phone:	
Email: X2CTLADN@SOUTHERNCO.COM		Project #: 18020186		SSOW#:			
Site: CCR - Plant Watson		Due Date Requested:		TAT Requested (days):			
PO #: SCS10382606		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Matrix (W=water, S=solid, O=water/oil, BT=Titration, As=As)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Matrix		5/3/19 0726		G		Water	
Matrix		5/3/19 0833		G		Water	
Matrix		5/3/19 0626		G		Water	
Matrix		5/3/19 0850		G		Water	
Field Filtered Sample (Yes or No)		6020_7470A		2540C_Calcd_300_ORGFM_28D		9315_Ra226_9320_Ra228	
Total Number of Containers							
Sample Identification		PZ-1		PZ-2		DUP-02	
Sample Identification		ER-1					
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: [Signature]		Date/Time: 5/3/19 1100		Company: [Signature]		Date/Time: 5-4-19	
Relinquished by:		Date/Time:		Company:		Date/Time: 9/15	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months	
Special Instructions/QC Requirements:							



Do Not Lift Using This Tag

151967 REV 7/08 RRD

Delivery



180-89714 Waybill

SDR

FedEx
Express

ORIGIN ID:MULA (050) 136 0192
RICK HAGENDORFLER
RDH:
5720 DOVE DR

SHIP DATE: 22APR19
ACTWGT: 20.00 LB MAX
CAD: 859116/CAFE3211

PLACE, FL 32571
UNITED STATES US

TO **SAMPLE RECEIVING**
EUROFINS TESTAMERICA PITTS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068

REF:

DEPT:

INV:

PO:

FedEx
TRK#
0221 4651 0081 2875

SATURDAY 12:00P
PRIORITY OVERNIGHT

X0 AGCA

15238
PA-US
PIT

Uncorrected temp
Thermometer ID 4.9 °C

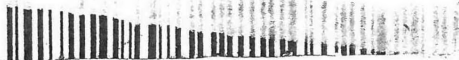
CF 0 Initials VO

PT-WI-SR-001 effective 11/8/18

MD

FID 295446

#285446 05/03 565J1/D66C/23AD



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89714-2

SDG Number: 1

Login Number: 89714

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89714-2

SDG Number: 1

Login Number: 89714
List Number: 3
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 05/10/19 11:19 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89715-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 2:15:10 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Job ID: 180-89715-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89715-1

Revised: to add field pH

Comments

No additional comments.

Receipt

The sample was received on 5/4/2019 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The continuing calibration blank (CCB) for analytical batch 400-441084 contained Lead above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 200.8, 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: PZ-3 (180-89715-1). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-440942 and analytical batch 400-441084 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 7470A: The matrix spike duplicate (MSD) recoveries for preparation batch 400-440417 and analytical batch 400-440709 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89715-1	PZ-3	Water	05/02/19 14:42	05/04/19 09:15	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-89715-1

Date Collected: 05/02/19 14:42

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			277902	05/07/19 11:11	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		100			277902	05/07/19 11:26	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 20:21	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	440942	05/15/19 10:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	100			441084	05/15/19 20:29	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440417	05/10/19 11:41	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 15:00	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/02/19 14:42	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

DRE = Daniel Etscheid

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

FDS = Sampler Field

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-89715-1

Date Collected: 05/02/19 14:42

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4100		100	71	mg/L			05/07/19 11:26	100
Fluoride	<0.26		2.0	0.26	mg/L			05/07/19 11:11	10
Sulfate	810		10	3.8	mg/L			05/07/19 11:11	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.089		0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 20:21	5
Barium	0.071		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 20:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 20:21	5
Cobalt	0.0012	J	0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 20:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 20:21	5
Molybdenum	0.30		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 20:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 20:21	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 20:21	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 20:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 20:21	5
Lithium	0.055		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 20:21	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		1.0	0.42	mg/L		05/15/19 10:30	05/15/19 20:29	100
Calcium	400		5.0	2.5	mg/L		05/15/19 10:30	05/15/19 20:29	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 11:41	05/13/19 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7400		100	100	mg/L			05/07/19 10:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.19				SU			05/02/19 14:42	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-277902/6
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/07/19 05:13	1
Fluoride	<0.026		0.20	0.026	mg/L			05/07/19 05:13	1
Sulfate	<0.38		1.0	0.38	mg/L			05/07/19 05:13	1

Lab Sample ID: LCS 180-277902/5
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Fluoride	1.25	1.35		mg/L		108	90 - 110
Sulfate	25.0	26.5		mg/L		106	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-440942/1-A ^5
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/15/19 10:30	05/15/19 18:05	5
Boron	<0.021		0.050	0.021	mg/L		05/15/19 10:30	05/15/19 18:05	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/15/19 10:30	05/15/19 18:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 18:05	5
Calcium	<0.13		0.25	0.13	mg/L		05/15/19 10:30	05/15/19 18:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/15/19 10:30	05/15/19 18:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/15/19 10:30	05/15/19 18:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/15/19 10:30	05/15/19 18:05	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/15/19 10:30	05/15/19 18:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/15/19 10:30	05/15/19 18:05	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/15/19 10:30	05/15/19 18:05	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/15/19 10:30	05/15/19 18:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/15/19 10:30	05/15/19 18:05	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/15/19 10:30	05/15/19 18:05	5

Lab Sample ID: LCS 400-440942/2-A
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0487		mg/L		97	80 - 120
Boron	0.100	0.0968		mg/L		97	80 - 120
Barium	0.0500	0.0477		mg/L		95	80 - 120
Beryllium	0.0500	0.0487		mg/L		97	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Cadmium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0495		mg/L		99	80 - 120
Chromium	0.0500	0.0482		mg/L		96	80 - 120
Molybdenum	0.0500	0.0480		mg/L		96	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-440942/2-A
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.0500	0.0507		mg/L		101	80 - 120
Antimony	0.0500	0.0460		mg/L		92	80 - 120
Selenium	0.0500	0.0482		mg/L		96	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120
Lithium	0.0500	0.0509		mg/L		102	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-440417/14-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 10:11	05/13/19 14:19	1

Lab Sample ID: LCS 400-440417/15-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-277972/2
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/07/19 10:52	1

Lab Sample ID: LCS 180-277972/1
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	186		mg/L		93	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-1
SDG: 1

HPLC/IC

Analysis Batch: 277902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	300.0	
180-89715-1	PZ-3	Total/NA	Water	300.0	
MB 180-277902/6	Method Blank	Total/NA	Water	300.0	
LCS 180-277902/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 440417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	7470A	
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 440709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	7470A	440417
MB 400-440417/14-A	Method Blank	Total/NA	Water	7470A	440417
LCS 400-440417/15-A	Lab Control Sample	Total/NA	Water	7470A	440417

Prep Batch: 440942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1 - DL	PZ-3	Total Recoverable	Water	3005A	
180-89715-1	PZ-3	Total Recoverable	Water	3005A	
MB 400-440942/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-440942/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 441084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total Recoverable	Water	6020	440942
180-89715-1 - DL	PZ-3	Total Recoverable	Water	6020	440942
MB 400-440942/1-A ^5	Method Blank	Total Recoverable	Water	6020	440942
LCS 400-440942/2-A	Lab Control Sample	Total Recoverable	Water	6020	440942

General Chemistry

Analysis Batch: 277972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	SM 2540C	
MB 180-277972/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-277972/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	Field Sampling	

Client Information		Lab Pkt: Bortot, Veronica		Carrier Tracking No(s):		COC No: 180-50460-10589.2	
Client Contact: Corey Ladner		E-Mail: veronica.bortot@testamericainc.com		Page #:		Page #:	
Company: Southern Company		Phone: 850 380 3456		Job #:		Job #:	
Address: PO BOX 2641 GSC8		Due Date Requested:		Analysis Requested		Preservation Codes:	
City: Birmingham		TAT Requested (days):		9315_Ra226, 9320_Ra228		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
State, Zip: AL, 35291		PO #: SCS10382606		6020_7470A		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone:		WO #:		2540C_Calc'd, 300_ORGFM_Z8D			
Email: X2CTLADN@SOUTHERNCO.COM		Project #: 18020186		31/19 1442 G			
Project Name: CCR - Plant Watson		SSOW#:		X X X			
Site:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Matrix (W=water, S=solid, O=water/soil, B=other (specify))		Water					
Sample Identification		82-3		5/19/19 1442 G		Water	
Field Filtered Sample (Yes or No)		X		X		X	
Total Number of Containers		X		X		X	
Spel							
Barcode: 180-69715 Chain of Custody							
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by:		Date:		Date:		Date:	
Relinquished by: [Signature]		5/19/19		1106		Company: BOK	
Relinquished by: [Signature]		Date/Time:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:	
Custody Seals Intact:		Custody Seal No.:		915		Company: [Signature]	
Δ Yes Δ No						Company: [Signature]	
Special Instructions/QC Requirements:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Archive For <input type="checkbox"/> Months	
Method of Shipment:		Date/Time:		Date/Time:		Date/Time:	
Received by: [Signature]		Date/Time:		Date/Time:		Date/Time:	
Received by:		Date/Time:		Date/Time:		Date/Time:	
Received by:		Date/Time:		Date/Time:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:							

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468



Environment Testing
TestAmerica

Chain of Custody Record

Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email: Project Name: CCR - Plant Watson Site: Project #: 18020186 SSOW#:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Accreditations Required (See note):		Carrier Tracking No(s): 180-362184-1 State of Origin: Georgia Job #: 180-89715-1	
Due Date Requested: 5/16/2019 TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification - Client ID (Lab ID) PZ-3 (180-89715-1)		Matrix (W=water, S=solid, O=wast/oli, BT=Tissue, AC=Air) Water		Total Number of Containers 1	
Sample Date 5/2/19		Sample Type (C=Comp, G=grab) G=grab		Special Instructions/Note:	
Sample Time 14:42 Eastern		Preservation Code:		Special Instructions/Note:	
Field Filtered Sample (Yes or No) X		Perform MS/MSD (Yes or No) X		Special Instructions/Note:	
SBASBa,BeCd,Cr,Co,Cu,Pb,NI,Se,Ag,TiV 7470A/7470A_Prep		Field Filtered Sample (Yes or No) X		Special Instructions/Note:	
SPSBa,BeCd,Cr,Co,Cu,Pb,NI,Se,Ag,TiV 7470A/7470A_Prep		Field Filtered Sample (Yes or No) X		Special Instructions/Note:	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by:
 Relinquished by:
 Relinquished by:
 Relinquished by:
 Custody Seals Intact:
 Δ Yes Δ No
 Custody Seal No.:
 Cooler Temperature(s) °C and Other Remarks:
 3.50C FAR 8

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Received by: *Kaitly Ramsey* Company: *PA*
 Date/Time: *5-8-19 900*
 Received by: _____ Company: _____
 Date/Time: _____
 Received by: _____ Company: _____
 Date/Time: _____
 Method of Shipment:
 Time: _____
 Date: *5/7/19 17:00*
 Date/Time: _____
 Date/Time: _____
 Date/Time: _____



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89715-1

SDG Number: 1

Login Number: 89715

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89715-1

SDG Number: 1

Login Number: 89715

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/08/19 05:17 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89715-2
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/24/2019 9:59:44 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Job ID: 180-89715-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89715-2

Comments

No additional comments.

Receipt

The sample was received on 5/4/2019 9:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-

The Ra-226 matrix spike (MS) is recovering (73%) outside of the control limits of 75-138%. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The data have been reported with this narrative.

PZ-3 (180-89715-1), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-429215

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-3 (180-89715-1), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 904.0, 9320: Radium-228 Prep Batch 160-429223

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

PZ-3 (180-89715-1), (LCS 160-429223/1-A), (MB 160-429223/24-A), (310-153734-D-7-B), (310-153734-C-7-C MS) and (310-153734-C-7-D MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Florida	NELAP		E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Illinois	NELAP		004375	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New Jersey	NELAP		PA005	06-30-19 *
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P330-16-00211	06-26-19
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
New York	NELAP		11616	04-01-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89715-1	PZ-3	Water	05/02/19 14:42	05/04/19 09:15	

- 1
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- 3
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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
 SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-89715-1

Date Collected: 05/02/19 14:42

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.55 mL	1.0 g	429215	05/21/19 09:05	ORM	TAL SL
Total/NA	Analysis	9315		1			432305	06/20/19 09:52	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Prep	PrecSep_0			1000.55 mL	1.0 g	429223	05/21/19 10:02	ORM	TAL SL
Total/NA	Analysis	9320		1			431911	06/17/19 15:56	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			432477	06/24/19 09:00	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

ORM = Octavia Moore

Batch Type: Analysis

CDR = Conrad Reuscher

SMP = Siobhan Perry

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-89715-1

Date Collected: 05/02/19 14:42

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.478		0.170	0.176	1.00	0.175	pCi/L	05/21/19 09:05	06/20/19 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					05/21/19 09:05	06/20/19 09:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.53		0.457	0.513	1.00	0.522	pCi/L	05/21/19 10:02	06/17/19 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					05/21/19 10:02	06/17/19 15:56	1
Y Carrier	85.2		40 - 110					05/21/19 10:02	06/17/19 15:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.00		0.488	0.542	5.00	0.522	pCi/L		06/24/19 09:00	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-429215/24-A
Matrix: Water
Analysis Batch: 432306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429215

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05470	U	0.0932	0.0933	1.00	0.164	pCi/L	05/21/19 09:05	06/20/19 13:22	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/21/19 09:05	06/20/19 13:22	1

Lab Sample ID: LCS 160-429215/1-A
Matrix: Water
Analysis Batch: 432305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429215

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	%Yield	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-226			11.4	9.497		1.06	1.00	0.168	pCi/L	84	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	105		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-429223/24-A
Matrix: Water
Analysis Batch: 431881

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429223

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1432	U	0.212	0.212	1.00	0.356	pCi/L	05/21/19 10:02	06/17/19 16:07	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					05/21/19 10:02	06/17/19 16:07	1
Y Carrier	82.6		40 - 110					05/21/19 10:02	06/17/19 16:07	1

Lab Sample ID: LCS 160-429223/1-A
Matrix: Water
Analysis Batch: 431911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429223

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec. Limits
	%Yield	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					
Radium-228			9.11	8.016		1.07	1.00	0.646	pCi/L	88	75 - 125
Carrier	LCS LCS		Limits								
Ba Carrier	105		40 - 110								
Y Carrier	83.7		40 - 110								

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89715-2
SDG: 1

Rad

Prep Batch: 429215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	PrecSep-21	
MB 160-429215/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-429215/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 429223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89715-1	PZ-3	Total/NA	Water	PrecSep_0	
MB 160-429223/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429223/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: SCS:10382606 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab Pkt: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): COC No: 180-50460-10589.2 Page: 200 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS:10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification Sample ID: 82-3 Sample Date: 5/2/19 Sample Time: 1442 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=water/soil, B=other (specify)): Water		Field Filtered Sample (Yes or No): 6020_7470A 2540C_Calc'd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228 Total Number of Containers:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: [Signature] Date/Time: 5/2/19 1106 Company: BOK Company		Received by: [Signature] Date/Time: 5/7/19 Company: TAP Company	
Relinquished by: [Signature] Date/Time: 5/2/19 1106 Company: BOK Company		Received by: [Signature] Date/Time: 5/7/19 Company: TAP Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:			
Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89715-2

SDG Number: 1

Login Number: 89715

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89715-2

SDG Number: 1

Login Number: 89715
List Number: 3
Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis
List Creation: 05/10/19 11:19 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89717-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 2:20:15 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Job ID: 180-89717-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89717-1

Revised; to add field pH

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 200.8, 6020: The continuing calibration blank (CCB) for analytical batch 400-441084 contained Lead above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 200.8, 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1R (180-89717-1) and DUP-01 (180-89717-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89717-1	APMW-1R	Water	05/02/19 12:12	05/04/19 09:15	
180-89717-2	DUP-01	Water	05/02/19 11:12	05/04/19 09:15	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-89717-1

Date Collected: 05/02/19 12:12

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			277902	05/07/19 10:10	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			277902	05/07/19 10:25	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440849	05/14/19 16:30	KWN	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 17:20	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	440849	05/14/19 16:30	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	50			441084	05/16/19 09:16	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440454	05/10/19 13:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 15:47	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/02/19 12:12	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-89717-2

Date Collected: 05/02/19 11:12

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			277902	05/07/19 10:40	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			277902	05/07/19 10:55	CMR	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	440849	05/14/19 16:30	KWN	TAL PEN
Total Recoverable	Analysis	6020		5			441084	05/15/19 17:24	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	440849	05/14/19 16:30	KWN	TAL PEN
Total Recoverable	Analysis	6020	DL	50			441084	05/16/19 09:20	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	440454	05/10/19 13:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1			440709	05/13/19 15:49	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	277972	05/07/19 10:52	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

JAP = Jane Parker

KWN = Karen Nall

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

CMR = Carl Reagle

FDS = Sampler Field

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-89717-1

Date Collected: 05/02/19 12:12

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			05/07/19 10:25	50
Fluoride	0.13	J	1.0	0.13	mg/L			05/07/19 10:10	5
Sulfate	6.0		5.0	1.9	mg/L			05/07/19 10:10	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0013	0.00046	mg/L		05/14/19 16:30	05/15/19 17:20	5
Barium	0.94		0.0025	0.00049	mg/L		05/14/19 16:30	05/15/19 17:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 17:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 17:20	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/14/19 16:30	05/15/19 17:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/14/19 16:30	05/15/19 17:20	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/14/19 16:30	05/15/19 17:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/14/19 16:30	05/15/19 17:20	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/14/19 16:30	05/15/19 17:20	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/14/19 16:30	05/15/19 17:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/14/19 16:30	05/15/19 17:20	5
Lithium	0.013		0.0050	0.0011	mg/L		05/14/19 16:30	05/15/19 17:20	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.3		0.50	0.21	mg/L		05/14/19 16:30	05/16/19 09:16	50
Calcium	130		2.5	1.3	mg/L		05/14/19 16:30	05/16/19 09:16	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 13:08	05/13/19 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		40	40	mg/L			05/07/19 10:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.78				SU			05/02/19 12:12	1

Client Sample ID: DUP-01

Lab Sample ID: 180-89717-2

Date Collected: 05/02/19 11:12

Matrix: Water

Date Received: 05/04/19 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			05/07/19 10:55	50
Fluoride	<0.13		1.0	0.13	mg/L			05/07/19 10:40	5
Sulfate	5.9		5.0	1.9	mg/L			05/07/19 10:40	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0013	0.00046	mg/L		05/14/19 16:30	05/15/19 17:24	5
Barium	0.94		0.0025	0.00049	mg/L		05/14/19 16:30	05/15/19 17:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 17:24	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Client Sample ID: DUP-01
Date Collected: 05/02/19 11:12
Date Received: 05/04/19 09:15

Lab Sample ID: 180-89717-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 17:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/14/19 16:30	05/15/19 17:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/14/19 16:30	05/15/19 17:24	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/14/19 16:30	05/15/19 17:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/14/19 16:30	05/15/19 17:24	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/14/19 16:30	05/15/19 17:24	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/14/19 16:30	05/15/19 17:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/14/19 16:30	05/15/19 17:24	5
Lithium	0.012		0.0050	0.0011	mg/L		05/14/19 16:30	05/15/19 17:24	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		0.50	0.21	mg/L		05/14/19 16:30	05/16/19 09:20	50
Calcium	130		2.5	1.3	mg/L		05/14/19 16:30	05/16/19 09:20	50

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 13:08	05/13/19 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3400		40	40	mg/L			05/07/19 10:52	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-277902/6
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/07/19 05:13	1
Fluoride	<0.026		0.20	0.026	mg/L			05/07/19 05:13	1
Sulfate	<0.38		1.0	0.38	mg/L			05/07/19 05:13	1

Lab Sample ID: LCS 180-277902/5
Matrix: Water
Analysis Batch: 277902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Fluoride	1.25	1.35		mg/L		108	90 - 110
Sulfate	25.0	26.5		mg/L		106	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-440849/1-A ^5
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 440849

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/14/19 16:30	05/15/19 15:23	5
Boron	<0.021		0.050	0.021	mg/L		05/14/19 16:30	05/15/19 15:23	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/14/19 16:30	05/15/19 15:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 15:23	5
Calcium	<0.13		0.25	0.13	mg/L		05/14/19 16:30	05/15/19 15:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/14/19 16:30	05/15/19 15:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/14/19 16:30	05/15/19 15:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/14/19 16:30	05/15/19 15:23	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/14/19 16:30	05/15/19 15:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/14/19 16:30	05/15/19 15:23	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/14/19 16:30	05/15/19 15:23	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/14/19 16:30	05/15/19 15:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/14/19 16:30	05/15/19 15:23	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/14/19 16:30	05/15/19 15:23	5

Lab Sample ID: LCS 400-440849/2-A
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0487		mg/L		97	80 - 120
Boron	0.100	0.0990		mg/L		99	80 - 120
Barium	0.0500	0.0471		mg/L		94	80 - 120
Beryllium	0.0500	0.0482		mg/L		96	80 - 120
Calcium	5.00	4.96		mg/L		99	80 - 120
Cadmium	0.0500	0.0477		mg/L		95	80 - 120
Cobalt	0.0500	0.0493		mg/L		99	80 - 120
Chromium	0.0500	0.0484		mg/L		97	80 - 120
Molybdenum	0.0500	0.0475		mg/L		95	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-440849/2-A
Matrix: Water
Analysis Batch: 441084

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 440849

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.0500	0.0491		mg/L		98	80 - 120
Antimony	0.0500	0.0471		mg/L		94	80 - 120
Selenium	0.0500	0.0481		mg/L		96	80 - 120
Thallium	0.0100	0.00994		mg/L		99	80 - 120
Lithium	0.0500	0.0498		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-440454/14-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440454

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/10/19 13:08	05/13/19 15:24	1

Lab Sample ID: LCS 400-440454/15-A
Matrix: Water
Analysis Batch: 440709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000980		mg/L		97	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-277972/2
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/07/19 10:52	1

Lab Sample ID: LCS 180-277972/1
Matrix: Water
Analysis Batch: 277972

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	186		mg/L		93	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

HPLC/IC

Analysis Batch: 277902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	300.0	
180-89717-1	APMW-1R	Total/NA	Water	300.0	
180-89717-2	DUP-01	Total/NA	Water	300.0	
180-89717-2	DUP-01	Total/NA	Water	300.0	
MB 180-277902/6	Method Blank	Total/NA	Water	300.0	
LCS 180-277902/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 440454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	7470A	
180-89717-2	DUP-01	Total/NA	Water	7470A	
MB 400-440454/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-440454/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 440709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	7470A	440454
180-89717-2	DUP-01	Total/NA	Water	7470A	440454
MB 400-440454/14-A	Method Blank	Total/NA	Water	7470A	440454
LCS 400-440454/15-A	Lab Control Sample	Total/NA	Water	7470A	440454

Prep Batch: 440849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1 - DL	APMW-1R	Total Recoverable	Water	3005A	
180-89717-1	APMW-1R	Total Recoverable	Water	3005A	
180-89717-2 - DL	DUP-01	Total Recoverable	Water	3005A	
180-89717-2	DUP-01	Total Recoverable	Water	3005A	
MB 400-440849/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-440849/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 441084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total Recoverable	Water	6020	440849
180-89717-1 - DL	APMW-1R	Total Recoverable	Water	6020	440849
180-89717-2	DUP-01	Total Recoverable	Water	6020	440849
180-89717-2 - DL	DUP-01	Total Recoverable	Water	6020	440849
MB 400-440849/1-A ^5	Method Blank	Total Recoverable	Water	6020	440849
LCS 400-440849/2-A	Lab Control Sample	Total Recoverable	Water	6020	440849

General Chemistry

Analysis Batch: 277972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	SM 2540C	
180-89717-2	DUP-01	Total/NA	Water	SM 2540C	
MB 180-277972/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-277972/1	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-1
SDG: 1

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	Field Sampling	

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Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: [blank] Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: [blank]		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: 850 380 3458 Carrier Tracking No(s): [blank]		COC No: 180-50460-10589.2 Page: 252 Job #: [blank]	
Due Date Requested: [blank] TAT Requested (days): [blank]		Analysis Requested: [blank]		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: [blank]	
PO #: SCS/10382606 WO #: [blank]		Field Filled Sample (Yes or No) [blank]		Total Number of Containers [blank]	
Project #: 18020186 SSOW#: [blank]		9315 Ra226, 9320 Ra228 2540C, Calcd, 300, ORGM, 28D 6020, 7470A		Barcode: 180-89717 Chain of Custody	
Sample Identification Sample Date: 5/2/19 Sample Time: 1212 Matrix: Water Sample Type (C=comp, G=grab): G Preservation Code: WAKI		6020, 7470A 9315 Ra226, 9320 Ra228		Special Instructions/QC Requirements: [blank]	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For [blank] Months		Special Instructions/QC Requirements: [blank]	
Empty Kit Relinquished by: [blank]		Date: 5/3/19 Time: 1108		Method of Shipment: [blank]	
Relinquished by: [Signature]		Date/Time: 5/3/19 1108 Company: [blank]		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: [blank] Company: [blank]		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: [blank] Company: [blank]		Received by: [Signature]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: [blank]		Company: CAPA Date/Time: 4-19 Date/Time: 9/15	





Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:				
Client Contact: Shipping/Receiving		Bortot, Veronica	Bortot, Veronica	180-362184.1	180-362184.1				
Company: TestAmerica Laboratories, Inc.		E-Mail: veronica.bortot@testamericainc.com	State of Origin: Georgia	Page: Page 1 of 1	Page: Page 1 of 1				
Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Accreditations Required (See note):	Job #: 180-89717-1						
Due Date Requested: 5/16/2019 TAT Requested (days):		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - other (specify) Other:							
Project Name: CCR - Plant Watson Site:		Analysis Requested							
PO #: WO #: Project #: 18020186 SSOW#:		Total Number of containers							
Sample Identification - Client ID (Lab ID)		Special Instructions/Note:							
APMW-1R (180-89717-1)	Sample Date: 5/2/19	Sample Time: 12:12 Eastern	Sample Type (C=Comp, G=grab):	Matrix (W=water, S=solid, O=wastewat, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60203005A (MOD)	7470A/7470A_Prep	1
DUP-01 (180-89717-2)	Sample Date: 5/2/19	Sample Time: 11:12 Eastern	Sample Type (C=Comp, G=grab):	Matrix (W=water, S=solid, O=wastewat, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60203005A (MOD)	7470A/7470A_Prep	1

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/rest/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Return To Client Disposal By Lab Archive For _____ Months
 Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: 5/7/19 12:00 Company: Keweenaw Awery
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: 3.5°C FL8



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89717-1

SDG Number: 1

Login Number: 89717

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89717-1

SDG Number: 1

Login Number: 89717

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/08/19 05:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C IR 8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89717-2
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/24/2019 9:54:05 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Job ID: 180-89717-2

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89717-2

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

RAD

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-

The Ra-226 matrix spike (MS) is recovering (73%) outside of the control limits of 75-138%. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The data have been reported with this narrative.

APMW-1R (180-89717-1), DUP-01 (180-89717-2), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 903.0, 9315: Ra-226 Prep Batch 160-429215

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1R (180-89717-1), DUP-01 (180-89717-2), (LCS 160-429215/1-A), (MB 160-429215/24-A), (310-153734-D-7-A), (310-153734-C-7-A MS) and (310-153734-C-7-B MSD)

Method(s) 904.0, 9320: Radium-228 Prep Batch 160-429223

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

APMW-1R (180-89717-1), DUP-01 (180-89717-2), (LCS 160-429223/1-A), (MB 160-429223/24-A), (310-153734-D-7-B), (310-153734-C-7-C MS) and (310-153734-C-7-D MSD)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-429223

The following samples had yellow discoloration: APMW-1R (180-89717-1) and DUP-01 (180-89717-2).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-429215

The following samples had yellow discoloration: APMW-1R (180-89717-1) and DUP-01 (180-89717-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Florida	NELAP		E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Illinois	NELAP		004375	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New Jersey	NELAP		PA005	06-30-19 *
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P330-16-00211	06-26-19
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	Dept. of Defense ELAP		L2305	04-06-22
ANAB	DoD		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
New York	NELAP		11616	04-01-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State		9997	08-31-19
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
Pennsylvania	NELAP		68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
Texas	NELAP		T104704193-19-13	07-31-20
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-20
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-89717-1	APMW-1R	Water	05/02/19 12:12	05/04/19 09:15	
180-89717-2	DUP-01	Water	05/02/19 11:12	05/04/19 09:15	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-89717-1

Date Collected: 05/02/19 12:12

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.05 mL	1.0 g	429215	05/21/19 09:05	ORM	TAL SL
Total/NA	Analysis	9315		1			432304	06/20/19 09:54	CDR	TAL SL
Instrument ID: GFPCPURPLE										
Total/NA	Prep	PrecSep_0			1000.05 mL	1.0 g	429223	05/21/19 10:02	ORM	TAL SL
Total/NA	Analysis	9320		1			431911	06/17/19 15:57	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			432477	06/24/19 09:00	SMP	TAL SL
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-89717-2

Date Collected: 05/02/19 11:12

Matrix: Water

Date Received: 05/04/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.23 mL	1.0 g	429215	05/21/19 09:05	ORM	TAL SL
Total/NA	Analysis	9315		1			432306	06/20/19 09:56	CDR	TAL SL
Instrument ID: GFPCBLUE										
Total/NA	Prep	PrecSep_0			1000.23 mL	1.0 g	429223	05/21/19 10:02	ORM	TAL SL
Total/NA	Analysis	9320		1			431911	06/17/19 15:57	CDR	TAL SL
Instrument ID: GFPCORANGE										
Total/NA	Analysis	Ra226_Ra228		1			432477	06/24/19 09:00	SMP	TAL SL
Instrument ID: NOEQUIP										

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL SL

Batch Type: Prep

ORM = Octavia Moore

Batch Type: Analysis

CDR = Conrad Reuscher

SMP = Siobhan Perry

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-89717-1

Date Collected: 05/02/19 12:12

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.49		0.398	0.507	1.00	0.179	pCi/L	05/21/19 09:05	06/20/19 09:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/21/19 09:05	06/20/19 09:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.33		0.487	0.575	1.00	0.477	pCi/L	05/21/19 10:02	06/17/19 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/21/19 10:02	06/17/19 15:57	1
Y Carrier	80.4		40 - 110					05/21/19 10:02	06/17/19 15:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.82		0.629	0.767	5.00	0.477	pCi/L		06/24/19 09:00	1

Client Sample ID: DUP-01

Lab Sample ID: 180-89717-2

Date Collected: 05/02/19 11:12

Matrix: Water

Date Received: 05/04/19 09:15

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.29		0.385	0.486	1.00	0.138	pCi/L	05/21/19 09:05	06/20/19 09:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/21/19 09:05	06/20/19 09:56	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.31		0.472	0.561	1.00	0.454	pCi/L	05/21/19 10:02	06/17/19 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					05/21/19 10:02	06/17/19 15:57	1
Y Carrier	82.6		40 - 110					05/21/19 10:02	06/17/19 15:57	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
 SDG: 1

Client Sample ID: DUP-01
Date Collected: 05/02/19 11:12
Date Received: 05/04/19 09:15

Lab Sample ID: 180-89717-2
Matrix: Water

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.60		0.609	0.742	5.00	0.454	pCi/L		06/24/19 09:00	1

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QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-429215/24-A
Matrix: Water
Analysis Batch: 432306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429215

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05470	U	0.0932	0.0933	1.00	0.164	pCi/L	05/21/19 09:05	06/20/19 13:22	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					05/21/19 09:05	06/20/19 13:22	1
	105									

Lab Sample ID: LCS 160-429215/1-A
Matrix: Water
Analysis Batch: 432305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429215

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.497		1.06	1.00	0.168	pCi/L	84	75 - 125
Carrier	LCS LCS		Limits						
Ba Carrier	%Yield	Qualifier	40 - 110						
	105								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-429223/24-A
Matrix: Water
Analysis Batch: 431881

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 429223

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1432	U	0.212	0.212	1.00	0.356	pCi/L	05/21/19 10:02	06/17/19 16:07	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					05/21/19 10:02	06/17/19 16:07	1
Y Carrier	82.6		40 - 110					05/21/19 10:02	06/17/19 16:07	1

Lab Sample ID: LCS 160-429223/1-A
Matrix: Water
Analysis Batch: 431911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 429223

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	9.11	8.016		1.07	1.00	0.646	pCi/L	88	75 - 125
Carrier	LCS LCS		Limits						
Ba Carrier	%Yield	Qualifier	40 - 110						
Y Carrier	83.7		40 - 110						

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-89717-2
SDG: 1

Rad

Prep Batch: 429215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	PrecSep-21	
180-89717-2	DUP-01	Total/NA	Water	PrecSep-21	
MB 160-429215/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-429215/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 429223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89717-1	APMW-1R	Total/NA	Water	PrecSep_0	
180-89717-2	DUP-01	Total/NA	Water	PrecSep_0	
MB 160-429223/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-429223/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Phone: 850 380 3458 Carrier Tracking No(s): COC No: 180-50460-10589.2 Page: 2532 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS/10382606 WO #: Project #: 18020186 SSOW#:		Analysis Requested: Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification Sample ID: ARMW-1B DUP-01 Sample Date: 5/2/19 Sample Time: 12:12 Sample Type (C=comp, G=grab): G Matrix (W=water, S=solid, D=dry residue, A=air): Water Field Filled Sample (Yes or No): Field Filled Sample (Vol or No): Total Number of Containers:		6020, 7470A 2540C, Calcd, 300, ORGM, 28D 9315, Ra226, 9320, Ra228 Barcode: 180-89717 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify):			
Empty Kit Relinquished by:			
Relinquished by: [Signature] Date/Time: 5/3/19 11:08 Company: [Signature]		Received by: [Signature] Date/Time: 5-4-19 Company: CAPA	
Relinquished by: [Signature] Date/Time: 5/3/19 11:08 Company: [Signature]		Received by: [Signature] Date/Time: 5-4-19 Company: CAPA	
Relinquished by: [Signature] Date/Time: 5/3/19 11:08 Company: [Signature]		Received by: [Signature] Date/Time: 5-4-19 Company: CAPA	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:			

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89717-2

SDG Number: 1

Login Number: 89717

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-89717-2

SDG Number: 1

Login Number: 89717

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/10/19 11:19 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90075-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 2:57:30 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Job ID: 180-90075-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-90075-1

Revised: to add field pH results

Comments

No additional comments.

Receipt

The samples were received on 5/15/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.4° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): APMW-1R (180-90075-1). The container labels list APMW-1, while the COC lists APMW-1R. The id on the COC was used as the date and time match up with this sample.

GC Semi VOA

Method(s) 300.0: The laboratory control sample (LCS) for 180-279368 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCS and were not detected or below the RL (J-value) in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 400-441994 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: APMW-1R (180-90075-1) and DUP-01 (180-90075-2).

Method(s) 200.8, 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: APMW-1R (180-90075-1), DUP-01 (180-90075-2) and (180-90073-C-1-B ^50). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-441994 was outside control limits: (180-90073-C-1-B SD ^25)

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-441731 and analytical batch 400-441994 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The post digestion spike % recovery associated with batch 400-441994 was outside of control limits. The following sample is impacted: (180-90073-C-1-B PDS ^5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90075-1	APMW-1R	Water	05/14/19 13:00	05/15/19 08:45	
180-90075-2	DUP-01	Water	05/14/19 12:00	05/15/19 08:45	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-90075-1

Date Collected: 05/14/19 13:00

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			279368	05/22/19 11:25	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		50			279368	05/22/19 11:40	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 12:45	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	50			441994	05/23/19 15:21	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			442151	05/24/19 14:52	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 15:16	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			281879	05/14/19 13:00	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01

Lab Sample ID: 180-90075-2

Date Collected: 05/14/19 12:00

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			279368	05/22/19 11:55	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		50			279368	05/22/19 12:11	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 12:49	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	50			441994	05/23/19 15:24	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			442151	05/24/19 15:12	DRE	TAL PEN
	Instrument ID: ICPMS7700									
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 13:59	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-90075-1

Date Collected: 05/14/19 13:00

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2000		50	36	mg/L			05/22/19 11:40	50
Fluoride	<0.13	*	1.0	0.13	mg/L			05/22/19 11:25	5
Sulfate	5.8		5.0	1.9	mg/L			05/22/19 11:25	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0027		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 12:45	5
Barium	1.0		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 12:45	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 12:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 12:45	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 12:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 12:45	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 12:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 12:45	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 12:45	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 12:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 12:45	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		0.50	0.21	mg/L		05/22/19 10:14	05/23/19 15:21	50
Calcium	140		2.5	1.3	mg/L		05/22/19 10:14	05/23/19 15:21	50

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.0050	0.0011	mg/L		05/22/19 10:14	05/24/19 14:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3600		40	40	mg/L			05/17/19 12:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.70				SU			05/14/19 13:00	1

Client Sample ID: DUP-01

Lab Sample ID: 180-90075-2

Date Collected: 05/14/19 12:00

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			05/22/19 12:11	50
Fluoride	<0.13	*	1.0	0.13	mg/L			05/22/19 11:55	5
Sulfate	6.5		5.0	1.9	mg/L			05/22/19 11:55	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0025		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 12:49	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Client Sample ID: DUP-01
Date Collected: 05/14/19 12:00
Date Received: 05/15/19 08:45

Lab Sample ID: 180-90075-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	1.0		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 12:49	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 12:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 12:49	5
Cobalt	0.00059	J	0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 12:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 12:49	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 12:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 12:49	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 12:49	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 12:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 12:49	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.4		0.50	0.21	mg/L		05/22/19 10:14	05/23/19 15:24	50
Calcium	130		2.5	1.3	mg/L		05/22/19 10:14	05/23/19 15:24	50

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.010		0.0050	0.0011	mg/L		05/22/19 10:14	05/24/19 15:12	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 13:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3900		40	40	mg/L			05/17/19 12:55	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-279368/6
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/22/19 04:54	1
Fluoride	<0.026		0.20	0.026	mg/L			05/22/19 04:54	1
Sulfate	<0.38		1.0	0.38	mg/L			05/22/19 04:54	1

Lab Sample ID: LCS 180-279368/5
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.8		mg/L		107	90 - 110
Fluoride	1.25	1.38	*	mg/L		111	90 - 110
Sulfate	25.0	26.9		mg/L		108	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-441731/1-A ^5
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 11:58	5
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 11:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 11:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Calcium	<0.13		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 11:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 11:58	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 11:58	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 11:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5

Lab Sample ID: LCS 400-441731/2-A
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0542		mg/L		108	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Barium	0.0500	0.0543		mg/L		109	80 - 120
Beryllium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.14		mg/L		103	80 - 120
Cadmium	0.0500	0.0552		mg/L		110	80 - 120
Cobalt	0.0500	0.0563		mg/L		113	80 - 120
Chromium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.0500	0.0530		mg/L		106	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-441731/2-A
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	0.0500	0.0512		mg/L		102	80 - 120
Antimony	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0513		mg/L		103	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120
Lithium	0.0500	0.0545		mg/L		109	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-441589/14-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441589

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 09:06	05/22/19 12:23	1

Lab Sample ID: LCS 400-441589/15-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		101	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-279053/2
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/17/19 12:55	1

Lab Sample ID: LCS 180-279053/1
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	190		mg/L		95	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

HPLC/IC

Analysis Batch: 279368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total/NA	Water	300.0	
180-90075-1	APMW-1R	Total/NA	Water	300.0	
180-90075-2	DUP-01	Total/NA	Water	300.0	
180-90075-2	DUP-01	Total/NA	Water	300.0	
MB 180-279368/6	Method Blank	Total/NA	Water	300.0	
LCS 180-279368/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 441589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total/NA	Water	7470A	
180-90075-2	DUP-01	Total/NA	Water	7470A	
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 441731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1 - DL	APMW-1R	Total Recoverable	Water	3005A	
180-90075-1 - RA	APMW-1R	Total Recoverable	Water	3005A	
180-90075-1	APMW-1R	Total Recoverable	Water	3005A	
180-90075-2 - DL	DUP-01	Total Recoverable	Water	3005A	
180-90075-2	DUP-01	Total Recoverable	Water	3005A	
180-90075-2 - RA	DUP-01	Total Recoverable	Water	3005A	
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 441826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total/NA	Water	7470A	441589
180-90075-2	DUP-01	Total/NA	Water	7470A	441589
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	441589
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	441589

Analysis Batch: 441994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total Recoverable	Water	6020	441731
180-90075-1 - DL	APMW-1R	Total Recoverable	Water	6020	441731
180-90075-2	DUP-01	Total Recoverable	Water	6020	441731
180-90075-2 - DL	DUP-01	Total Recoverable	Water	6020	441731
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	6020	441731
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	6020	441731

Analysis Batch: 442151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1 - RA	APMW-1R	Total Recoverable	Water	6020	441731
180-90075-2 - RA	DUP-01	Total Recoverable	Water	6020	441731

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90075-1
SDG: 1

General Chemistry

Analysis Batch: 279053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total/NA	Water	SM 2540C	
180-90075-2	DUP-01	Total/NA	Water	SM 2540C	
MB 180-279053/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-279053/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90075-1	APMW-1R	Total/NA	Water	Field Sampling	

Client Information Client Contact: Philip Evans Client Address: 850-336-0192 Phone: 850-336-0192		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com		Carrier (Tracking No.): COC No: 180-50461-10589 1	
Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State/Zip: AL, 35291 Phone: SCS10382606 Email: XZTLADN@SOUTHERNCO.COM		Project #: 18020186 SOW#:		Page: 2 Page 1 of 5 Job #	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: 18020186 SOW#:		Analysis Requested			
Sample Identification APW-12 Dup-01		Sample Date: 5/14/19 Sample Time: 1300 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wast/woil, BT=tissue, A=air): Water		Field Filtered Sample (Yes or No): X D: X N: X I: X	
Preservation Code: SI		Sample Date: 5/14/19 Sample Time: 1200 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wast/woil, BT=tissue, A=air): Water		Total Number of Containers: X	
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		Barcode: 180-90075 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: [Signature] Date/Time: 5/14/19 1745 Company: POH		Relinquished by: [Signature] Date/Time: 5/15/19 Company: Company		Relinquished by: [Signature] Date/Time: 8/9/19 Company: Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			



TestAmerica

THE LEADER IN TESTING

RT 97
FZ
10:30
A
3698
05:15

SHIP DATE: 02MAY19
ACTWGT: 10.00 LB MAN
CAD: 859116/CAFE3211

ORIGIN ID:MULA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE

PACE, FL 32571
UNITED STATES US

SAMPLE RECEIVING
EUROFINS TESTAMERICA PITTS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058
REF: S180-50461



180-90075 Waybill

RETURNS MON - SAT
PRIORITY OVERNIGHT

Uncorrected temp
Thermometer ID

11
12
JS

CF 0 Initials

PT-WI-SR-001 effective 11/8/18

15238



TH AGCA

4651 0081 3698

WED - 15 MAY 10:30
PRIORITY OVERNIGHT

PA-US
15238

RT 97
FZ
10:30
A
3702
05:15

TestAmerica

THE LEADER IN TESTING

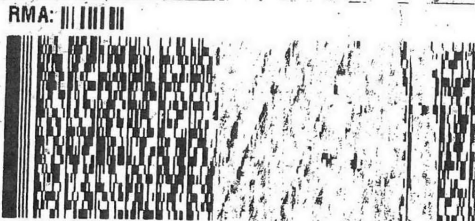
ORIGIN ID:MULA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE

PACE, FL 32571
UNITED STATES US

SAMPLE RECEIVING
EUROFINS TESTAMERICA PITTS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058
REF: S180-50461



FedEx Express



TRK# 4651 0081 3702

RETURNS MON - SAT
PRIORITY OVERNIGHT

15238

PA-US

Uncorrected temp
Thermometer ID

11
10

CF 0 Initials JS

PT-WI-SR-001 effective 11/8/18



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Lab PM: Bortot, Veronica		Carrier Tracking No(s): COC No: 180-363107-1																									
Client Contact: Shipping/Receiving		Phone: E-Mail: veronica.bortot@testamericainc.com		Page: Page 1 of 1																									
Company: TestAmerica Laboratories, Inc.		Address: 3355 McLemore Drive, Pensacola FL, 32514		Job #: 180-90075-1																									
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		E-mail:		Preservation Codes:																									
Project Name: CCR - Plant Watson		Project #: 18020186		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDTA Z - other (specify)																									
Site:		SSOW#:		Other:																									
Due Date Requested: 5/28/2019		TAT Requested (days):		Analysis Requested																									
PO #:		WO #:		<table border="1"> <thead> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Perform M/MSD (Yes or No)</th> <th>SbAsBa,BeCd,Cr,Co,CuPbNi,Se,Ag,Tl,V</th> <th>7470A/7470A_Prep</th> <th>Total Number of containers</th> <th>Special Instructions/Note:</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	SbAsBa,BeCd,Cr,Co,CuPbNi,Se,Ag,Tl,V	7470A/7470A_Prep	Total Number of containers	Special Instructions/Note:	X	X	X	X	1		X	X	X	X	1							
Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	SbAsBa,BeCd,Cr,Co,CuPbNi,Se,Ag,Tl,V	7470A/7470A_Prep			Total Number of containers	Special Instructions/Note:																						
X	X	X	X			1																							
X	X	X	X			1																							
Sample Date		Sample Time																											
Sample Type (C=Comp, G=grab)		Sample Time																											
Matrix (W=water, S=solid, O=wastoid, BT=Tissue, A=Air)		Preservation Code:																											
APMW-1R (180-90075-1)		13:00 Eastern		Water																									
DUP-01 (180-90075-2)		12:00 Eastern		Water																									

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: _____ Date/Time: 5/16/19 1700 Company: JFA Company

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No No

Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 4.5°C JFA



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90075-1

SDG Number: 1

Login Number: 90075

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90075-1

SDG Number: 1

Login Number: 90075

List Number: 2

Creator: Shannon, Jonathon W

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/17/19 01:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90077-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 3:13:18 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Job ID: 180-90077-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-90077-1

Revised: to add field pH results

Comments

No additional comments.

Receipt

The samples were received on 5/15/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.4° C.

GC Semi VOA

Method(s) 300.0: The laboratory control sample (LCS) for 180-279368 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCS and were not detected or below the RL (J-value) in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 400-441994 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: PZ-3 (180-90077-1) and EB-01 (180-90077-2).

Method(s) 200.8, 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: PZ-3 (180-90077-1). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-441994 was outside control limits: (180-90073-C-1-B SD ^25)

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-441731 and analytical batch 400-441994 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The post digestion spike % recovery associated with batch 400-441994 was outside of control limits. The following sample is impacted: (180-90073-C-1-B PDS ^5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90077-1	PZ-3	Water	05/14/19 11:15	05/15/19 08:45	
180-90077-2	EB-01	Water	05/14/19 11:20	05/15/19 08:45	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-90077-1

Date Collected: 05/14/19 11:15

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			279368	05/22/19 14:29	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		100			279368	05/22/19 14:44	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 13:02	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	DL		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	DL	100			441994	05/23/19 15:36	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 14:21	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/14/19 11:15	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Lab Sample ID: 180-90077-2

Date Collected: 05/14/19 11:20

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			279368	05/22/19 09:07	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 13:22	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			441994	05/23/19 15:40	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 14:23	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-90077-1

Date Collected: 05/14/19 11:15

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4200		100	71	mg/L			05/22/19 14:44	100
Fluoride	<0.26	*	2.0	0.26	mg/L			05/22/19 14:29	10
Sulfate	810		10	3.8	mg/L			05/22/19 14:29	10

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 13:02	5
Barium	0.068		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 13:02	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:02	5
Cobalt	0.0024	J	0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 13:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 13:02	5
Molybdenum	0.36		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 13:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 13:02	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 13:02	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 13:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 13:02	5
Lithium	0.047		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 13:02	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.3		1.0	0.42	mg/L		05/22/19 10:14	05/23/19 15:36	100
Calcium	420		5.0	2.5	mg/L		05/22/19 10:14	05/23/19 15:36	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 14:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8300		100	100	mg/L			05/17/19 12:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.12				SU			05/14/19 11:15	1

Client Sample ID: EB-01

Lab Sample ID: 180-90077-2

Date Collected: 05/14/19 11:20

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/22/19 09:07	1
Fluoride	<0.026	*	0.20	0.026	mg/L			05/22/19 09:07	1
Sulfate	<0.38		1.0	0.38	mg/L			05/22/19 09:07	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 13:22	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 13:22	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:22	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Client Sample ID: EB-01

Lab Sample ID: 180-90077-2

Date Collected: 05/14/19 11:20

Matrix: Water

Date Received: 05/15/19 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.13		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 13:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 13:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 13:22	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 13:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 13:22	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 13:22	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 13:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 13:22	5
Lithium	0.0019	J	0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 13:22	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 15:40	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/17/19 12:55	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-279368/6
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/22/19 04:54	1
Fluoride	<0.026		0.20	0.026	mg/L			05/22/19 04:54	1
Sulfate	<0.38		1.0	0.38	mg/L			05/22/19 04:54	1

Lab Sample ID: LCS 180-279368/5
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.8		mg/L		107	90 - 110
Fluoride	1.25	1.38	*	mg/L		111	90 - 110
Sulfate	25.0	26.9		mg/L		108	90 - 110

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-441731/1-A ^5
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 11:58	5
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 11:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 11:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Calcium	<0.13		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 11:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 11:58	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 11:58	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 11:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5

Lab Sample ID: LCS 400-441731/2-A
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0500	0.0542		mg/L		108	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Barium	0.0500	0.0543		mg/L		109	80 - 120
Beryllium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.14		mg/L		103	80 - 120
Cadmium	0.0500	0.0552		mg/L		110	80 - 120
Cobalt	0.0500	0.0563		mg/L		113	80 - 120
Chromium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.0500	0.0530		mg/L		106	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 400-441731/2-A
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	0.0500	0.0512		mg/L		102	80 - 120
Antimony	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0513		mg/L		103	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120
Lithium	0.0500	0.0545		mg/L		109	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-441589/14-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441589

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 09:06	05/22/19 12:23	1

Lab Sample ID: LCS 400-441589/15-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		101	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-279053/2
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/17/19 12:55	1

Lab Sample ID: LCS 180-279053/1
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	190		mg/L		95	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

HPLC/IC

Analysis Batch: 279368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total/NA	Water	300.0	
180-90077-1	PZ-3	Total/NA	Water	300.0	
180-90077-2	EB-01	Total/NA	Water	300.0	
MB 180-279368/6	Method Blank	Total/NA	Water	300.0	
LCS 180-279368/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 441589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total/NA	Water	7470A	
180-90077-2	EB-01	Total/NA	Water	7470A	
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 441731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total Recoverable	Water	3005A	
180-90077-1 - DL	PZ-3	Total Recoverable	Water	3005A	
180-90077-2 - RA	EB-01	Total Recoverable	Water	3005A	
180-90077-2	EB-01	Total Recoverable	Water	3005A	
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 441826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total/NA	Water	7470A	441589
180-90077-2	EB-01	Total/NA	Water	7470A	441589
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	441589
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	441589

Analysis Batch: 441994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total Recoverable	Water	6020	441731
180-90077-1 - DL	PZ-3	Total Recoverable	Water	6020	441731
180-90077-2	EB-01	Total Recoverable	Water	6020	441731
180-90077-2 - RA	EB-01	Total Recoverable	Water	6020	441731
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	6020	441731
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	6020	441731

General Chemistry

Analysis Batch: 279053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total/NA	Water	SM 2540C	
180-90077-2	EB-01	Total/NA	Water	SM 2540C	
MB 180-279053/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-279053/1	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90077-1
SDG: 1

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90077-1	PZ-3	Total/NA	Water	Field Sampling	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

TestAmerica

THE LEADER

TING

3698
05.15
A
10:30
1

RT97

ORIGIN ID:MULA (850) 336-0192
RICK HAGENDORFER
RDH
5720 DOVE DRIVE

SHIP DATE: 02MAY19
ACTWGT: 10.00 LB MAN
CAD: 859116/CAFE3211

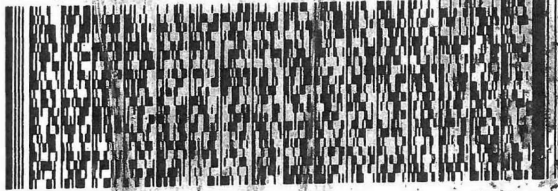
PACE, FL 32571
UNITED STATES US

SAMPLE RECEIVING
EUROFINS TESTAMERICA PITTS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058
REF: S180-50461

RMA: ||| ||| |||



RETURNS MON - SAT
PRIORITY OVERNIGHT

Uncorrected temp
Thermometer ID

CF 0 Initials JS

PT-WI-SR-001 effective 11/8/18

15238



TH AGCA

4651 0081 3698

WED - 15 MAY 10:30
PRIORITY OVERNIGHT

PA-US
15238

3702
05.15
A
10:30
1

RT97

TestAmerica

THE LEADER

TING

ORIGIN ID:MULA (850)
RICK HAGENDORFER
RDH
57

02MAY19
LB MAN
CAFE3211

PP
UN
TO

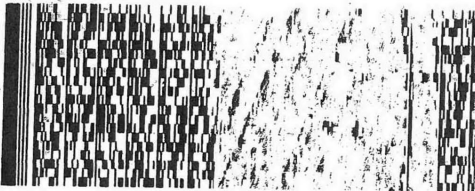


180-90077 Waybill

PITTSBURGH PA 15238

(412) 963-7058
REF: S180-50461

RMA: ||| ||| |||



TRK# 4651 0081

RETURNS MON - SAT
PRIORITY OVERNIGHT

15238

PA-US

Uncorrected temp
Thermometer ID

CF 0 Initials JS

PT-WI-SR-001 effective 11/8/18

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468



Client Information (Sub Contract Lab)

Client Contact: _____
Shipping/Receiving: _____
Company: _____
Address: _____
13715 Rider Trail North
City: _____
State, Zip: _____
MO, 63045
Phone: _____
314-298-8566(Tel) 314-298-8757(Fax)
Email: _____
Project Name: _____
CCR - Plant Watson
Site: _____

Sampler: _____
Phone: _____
Lab PM: _____
Bortol, Veronica
E-Mail: _____
veronica.bortol@testamericainc.com

Accreditations Required (See note): _____

Carrier Tracking No(s): _____
State of Origin: _____
Georgia

COC No: _____
180-363116.1
Page: _____
Page 1 of 1
Lab #:

Due Date Requested: _____
5/28/2019
TAT Requested (days): _____

Analysis Requested

PO #: _____
W/O #: _____
Project #: _____
18020186
SSOW#: _____

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
9315_Ra226/PrecSep_21 Standard Target List	
9320_Ra228/PrecSep_0 Standard Target List	
Ra226Ra228_GFPC	

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anocher
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Z - other (specify)
Other: _____

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Organic, Inorganic, etc.)	Preservation Code:
PZ-3 (180-90077-1)	5/14/19	11:15	Water	Water	
EB-01 (180-90077-2)	5/14/19	11:20	Water	Water	

Total Number of containers
1
1
1

Special Instructions/Note: _____

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/methods being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) _____
Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
Special Instructions/QC Requirements: _____

Empty Kit Relinquished by: _____
Date: _____

Method of Shipment: _____

Relinquished by: _____
Date/Time: _____

Received by: _____
Date/Time: _____

Relinquished by: _____
Date/Time: _____

Received by: _____
Date/Time: _____

Custody Seals Intact: _____
Δ Yes Δ No
Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Bortot, Veronica	State of Origin:	180-363107.1
Company: TestAmerica Laboratories, Inc.		E-Mail: veronica.bortot@testamericainc.com	Georgina	Page:	Page 1 of 1
Address: 3355 McLemore Drive, Pensacola FL, 32514		Due Date Requested: 5/28/2019	Job #: 180-90077-1		
City: State, Zip: Phone: 850-474-1001(Tel) 850-478-2671(Fax)		TAT Requested (days):	Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:		
Project Name: CCR - Plant Watson		PO #:	Analysis Requested		
Site:		WO #:	Total Number of containers		
Project #: 18020186		SSOW#:	Special Instructions/Note:		
Site:		SSOW#:	Special Instructions/Note:		
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=TISSUE, A=Air)
PZ-3 (180-90077-1)	5/14/19	11:15 Eastern	Water	X	X
EB-01 (180-90077-2)	5/14/19	11:20 Eastern	Water	X	X
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SbAsBa,BeCd,Cr,Cu,PbNi,Se,AgTl,V	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SbAsBa,BeCd,Cr,Cu,PbNi,Se,AgTl,V	
7470A/7470A Prep		6020/3005A (MOD)		7470A/7470A Prep	

Notes: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Empty Kit Relinquished by: _____ Date: _____
Relinquished by: _____ Date/Time: 5/16/19 17:01 Company: Dignity
Relinquished by: _____ Date/Time: _____ Company: _____
Relinquished by: _____ Date/Time: _____ Company: _____
Custody Seals Intact: _____ Custody Seal No.: _____
Δ Yes Δ No

Received by: *Megan Murphy* Date/Time: 05-17-19 9:12a Company: TFA
Received by: _____ Date/Time: _____ Company: _____
Received by: _____ Date/Time: _____ Company: _____
Cooler Temperature(s) °C and Other Remarks: 2.5°C IR7

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
Special Instructions/QC Requirements:



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90077-1

SDG Number: 1

Login Number: 90077

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90077-1

SDG Number: 1

Login Number: 90077

List Number: 2

Creator: Shannon, Jonathon W

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/17/19 01:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90078-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
6/17/2019 3:26:19 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Job ID: 180-90078-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-90078-1

Revised: to add field pH results

Comments

No additional comments.

Receipt

The samples were received on 5/15/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 1.4° C.

GC Semi VOA

Method(s) 300.0: The laboratory control sample (LCS) for 180-279368 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCS and were not detected or below the RL (J-value) in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 400-441994 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: PZ-1 (180-90078-1) and PZ-2 (180-90078-2).

Method(s) 6020: The serial dilution performed for the following sample associated with batch 400-441994 was outside control limits: (180-90073-C-1-B SD ^25)

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 400-441731 and analytical batch 400-441994 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The post digestion spike % recovery associated with batch 400-441994 was outside of control limits. The following sample is impacted: (180-90073-C-1-B PDS ^5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (DW)	Kentucky UST	4	162013	04-30-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19 *
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90078-1	PZ-1	Water	05/14/19 17:30	05/15/19 08:45	
180-90078-2	PZ-2	Water	05/14/19 16:10	05/15/19 08:45	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-90078-1

Date Collected: 05/14/19 17:30

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			279368	05/22/19 12:57	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 13:26	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			441994	05/23/19 15:44	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 14:25	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/14/19 17:30	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-90078-2

Date Collected: 05/14/19 16:10

Matrix: Water

Date Received: 05/15/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			279368	05/22/19 10:39	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020		5			441994	05/23/19 13:30	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total Recoverable	Prep	3005A	RA		50 mL	50 mL	441731	05/22/19 10:14	AC	TAL PEN
Total Recoverable	Analysis	6020	RA	5			441994	05/23/19 15:48	DRE	TAL PEN
Instrument ID: ICPMS7700										
Total/NA	Prep	7470A			40 mL	40 mL	441589	05/21/19 11:05	JAP	TAL PEN
Total/NA	Analysis	7470A		1			441826	05/22/19 14:27	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	279053	05/17/19 12:55	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			281879	05/14/19 16:10	FDS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

AC = Alexis Castaing

JAP = Jane Parker

Batch Type: Analysis

DRE = Daniel Etscheid

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-90078-1

Date Collected: 05/14/19 17:30

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8		1.0	0.71	mg/L			05/22/19 12:57	1
Fluoride	0.039	J *	0.20	0.026	mg/L			05/22/19 12:57	1
Sulfate	1.3		1.0	0.38	mg/L			05/22/19 12:57	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 13:26	5
Barium	0.083		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 13:26	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:26	5
Calcium	14		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 13:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:26	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 13:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 13:26	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 13:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 13:26	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 13:26	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 13:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 13:26	5
Lithium	0.011		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 13:26	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 15:44	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000071	J	0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		10	10	mg/L			05/17/19 12:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.57				SU			05/14/19 17:30	1

Client Sample ID: PZ-2

Lab Sample ID: 180-90078-2

Date Collected: 05/14/19 16:10

Matrix: Water

Date Received: 05/15/19 08:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			05/22/19 10:39	1
Fluoride	0.071	J *	0.20	0.026	mg/L			05/22/19 10:39	1
Sulfate	2.2		1.0	0.38	mg/L			05/22/19 10:39	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00061	J	0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 13:30	5
Barium	0.076		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 13:30	5
Beryllium	<0.00034	^	0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:30	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Client Sample ID: PZ-2

Lab Sample ID: 180-90078-2

Date Collected: 05/14/19 16:10

Matrix: Water

Date Received: 05/15/19 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	13		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 13:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 13:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 13:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 13:30	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 13:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 13:30	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 13:30	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 13:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 13:30	5
Lithium	0.015		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 13:30	5

Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 15:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 11:05	05/22/19 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		10	10	mg/L			05/17/19 12:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.64				SU			05/14/19 16:10	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-279368/6
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			05/22/19 04:54	1
Fluoride	<0.026		0.20	0.026	mg/L			05/22/19 04:54	1
Sulfate	<0.38		1.0	0.38	mg/L			05/22/19 04:54	1

Lab Sample ID: LCS 180-279368/5
Matrix: Water
Analysis Batch: 279368

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.8		mg/L		107	90 - 110
Fluoride	1.25	1.38	*	mg/L		111	90 - 110
Sulfate	25.0	26.9		mg/L		108	90 - 110

Lab Sample ID: 180-90078-1 MS
Matrix: Water
Analysis Batch: 279368

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.8		25.0	35.1		mg/L		105	80 - 120
Fluoride	0.039	J *	1.25	1.20		mg/L		93	80 - 120
Sulfate	1.3		25.0	27.3		mg/L		104	80 - 120

Lab Sample ID: 180-90078-1 MSD
Matrix: Water
Analysis Batch: 279368

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.8		25.0	35.1		mg/L		105	80 - 120	0	20
Fluoride	0.039	J *	1.25	1.24		mg/L		96	80 - 120	4	20
Sulfate	1.3		25.0	27.4		mg/L		104	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-441731/1-A ^5
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/22/19 10:14	05/23/19 11:58	5
Boron	<0.021		0.050	0.021	mg/L		05/22/19 10:14	05/23/19 11:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/22/19 10:14	05/23/19 11:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Calcium	<0.13		0.25	0.13	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/22/19 10:14	05/23/19 11:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/22/19 10:14	05/23/19 11:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5
Molybdenum	<0.0020		0.015	0.0020	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/22/19 10:14	05/23/19 11:58	5
Antimony	<0.0010		0.0025	0.0010	mg/L		05/22/19 10:14	05/23/19 11:58	5
Selenium	<0.00071		0.0013	0.00071	mg/L		05/22/19 10:14	05/23/19 11:58	5

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 400-441731/1-A ^5
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.000085		0.00050	0.000085	mg/L		05/22/19 10:14	05/23/19 11:58	5
Lithium	<0.0011		0.0050	0.0011	mg/L		05/22/19 10:14	05/23/19 11:58	5

Lab Sample ID: LCS 400-441731/2-A
Matrix: Water
Analysis Batch: 441994

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 441731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0542		mg/L		108	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Barium	0.0500	0.0543		mg/L		109	80 - 120
Beryllium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.14		mg/L		103	80 - 120
Cadmium	0.0500	0.0552		mg/L		110	80 - 120
Cobalt	0.0500	0.0563		mg/L		113	80 - 120
Chromium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.0500	0.0530		mg/L		106	80 - 120
Lead	0.0500	0.0512		mg/L		102	80 - 120
Antimony	0.0500	0.0488		mg/L		98	80 - 120
Selenium	0.0500	0.0513		mg/L		103	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120
Lithium	0.0500	0.0545		mg/L		109	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-441589/14-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441589

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/21/19 09:06	05/22/19 12:23	1

Lab Sample ID: LCS 400-441589/15-A
Matrix: Water
Analysis Batch: 441826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00101		mg/L		101	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-279053/2
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			05/17/19 12:55	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
 SDG: 1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-279053/1
Matrix: Water
Analysis Batch: 279053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	190		mg/L	-	95	80 - 120

Lab Sample ID: 180-90078-2 DU
Matrix: Water
Analysis Batch: 279053

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	150		148		mg/L	-	4	10

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QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

HPLC/IC

Analysis Batch: 279368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total/NA	Water	300.0	
180-90078-2	PZ-2	Total/NA	Water	300.0	
MB 180-279368/6	Method Blank	Total/NA	Water	300.0	
LCS 180-279368/5	Lab Control Sample	Total/NA	Water	300.0	
180-90078-1 MS	PZ-1	Total/NA	Water	300.0	
180-90078-1 MSD	PZ-1	Total/NA	Water	300.0	

Metals

Prep Batch: 441589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total/NA	Water	7470A	
180-90078-2	PZ-2	Total/NA	Water	7470A	
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 441731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total Recoverable	Water	3005A	
180-90078-1 - RA	PZ-1	Total Recoverable	Water	3005A	
180-90078-2	PZ-2	Total Recoverable	Water	3005A	
180-90078-2 - RA	PZ-2	Total Recoverable	Water	3005A	
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 441826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total/NA	Water	7470A	441589
180-90078-2	PZ-2	Total/NA	Water	7470A	441589
MB 400-441589/14-A	Method Blank	Total/NA	Water	7470A	441589
LCS 400-441589/15-A	Lab Control Sample	Total/NA	Water	7470A	441589

Analysis Batch: 441994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total Recoverable	Water	6020	441731
180-90078-1 - RA	PZ-1	Total Recoverable	Water	6020	441731
180-90078-2	PZ-2	Total Recoverable	Water	6020	441731
180-90078-2 - RA	PZ-2	Total Recoverable	Water	6020	441731
MB 400-441731/1-A ^5	Method Blank	Total Recoverable	Water	6020	441731
LCS 400-441731/2-A	Lab Control Sample	Total Recoverable	Water	6020	441731

General Chemistry

Analysis Batch: 279053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total/NA	Water	SM 2540C	
180-90078-2	PZ-2	Total/NA	Water	SM 2540C	
MB 180-279053/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-279053/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-90078-2 DU	PZ-2	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90078-1
SDG: 1

Field Service / Mobile Lab

Analysis Batch: 281879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90078-1	PZ-1	Total/NA	Water	Field Sampling	
180-90078-2	PZ-2	Total/NA	Water	Field Sampling	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

180-90078 Waybill



PT-WI-SR-001 effective 11/8/18

CF
Initials JS

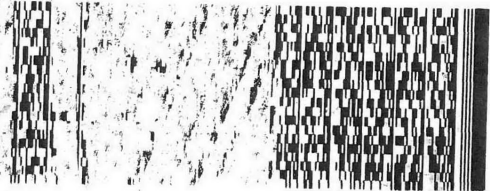
Uncorrected temp
Thermometer ID 10



PA-US

15238

MON-SAT
OVERNIGHT



TRK# 4651 0081 3702

0221

RMA: 11111111

REF: S180 - 50461

(412) 963-7068

PITTSBURGH

301 ALPHA DR

EUROFINS TESTAMERICA

TO SAMPLE RECEIVING

PACE, FL 32571

UNITED STATES US

5720 DOVE DRIVE

RDH

RICK HAGEDORFER

ORIGIN ID: MULA (850)

MAY19
LB MAN
3FE3211

TestAmerica

RT 97

1

10:30

3702

05.15

SYST: PRIOR

4651 0081 3698 WED - 15 MAY 10:30
PRIORITY OVERNIGHT

H AGCA

15238

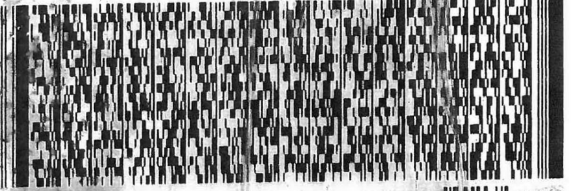
PA-US

TIP



15238

RETURNS MON-SAT
PRIORITY OVERNIGHT



RMA: 11111111

REF: S180 - 50461

(412) 963-7068

PITTSBURGH PA 15238

301 ALPHA DR

EUROFINS TESTAMERICA PITTS

TO SAMPLE RECEIVING

PACE, FL 32571

UNITED STATES US

5720 DOVE DRIVE

RDH

RICK HAGEDORFER

ORIGIN ID: MULA (850) 336-0192

SHIP DATE: 12MAY19

ACTWT: 10.00 LB MAN

CAD: 859116/CAF3211

RT 97

10:30

3698

05.15

THE LEADER

TestAmerica

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90078-1

SDG Number: 1

Login Number: 90078

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90078-1

SDG Number: 1

Login Number: 90078

List Number: 2

Creator: Shannon, Jonathon W

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/17/19 01:21 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1°C IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90685-1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
7/29/2019 1:33:09 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Job ID: 180-90685-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-90685-1**

Comments

No additional comments.

Receipt

The samples were received on 5/30/2019 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria. There was melted ice in the cooler, but it was out of temp. PZ-1 (180-90685-1), PZ-2 (180-90685-2) and DUP-02 (180-90685-3). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020, 6020A: The following samples were diluted due to the nature of the sample matrix: (180-90689-C-1-D ^10), (180-90689-C-1-E MS ^10), (180-90689-C-1-F MSD ^10), (180-90689-C-1-D PDS ^10) and (180-90689-C-1-D SD ^50). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State		40150	06-30-19
Alabama	State Program	4	40150	06-30-20
ANAB	ISO/IEC 17025		L2471	02-22-20
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State		AZ0710	01-12-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State		2510	06-30-19
California	State Program	9	2510	06-30-19 *
Florida	NELAP	4	E81010	06-30-20 *
Florida	NELAP		E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-20
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19 *
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-20
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-20
Massachusetts	State Program	1	M-FL094	06-30-20
Michigan	State Program	5	9912	05-06-20
New Jersey	NELAP	2	FL006	06-30-20
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State		9810-186	08-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Pennsylvania	NELAP		68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19 *
Tennessee	State Program	4	TN02907	06-30-20
Texas	NELAP	6	T104704286-18-15	09-30-19
Texas	NELAP		T104704286	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-20
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90685-1	PZ-1	Water	05/29/19 10:05	05/30/19 15:50	
180-90685-2	PZ-2	Water	05/29/19 11:00	05/30/19 15:50	
180-90685-3	DUP-02	Water	05/29/19 09:05	05/30/19 15:50	

- 1
- 2
- 3
- 4
- 5
- 6
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- 10
- 11
- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PEN
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Client Sample ID: PZ-1

Lab Sample ID: 180-90685-1

Date Collected: 05/29/19 10:05

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			281171	06/10/19 10:08	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 12:47	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total Recoverable	Prep	3005A			25 mL	25 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			285918	07/24/19 13:55	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	280678	06/04/19 13:08	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			282566	05/29/19 10:05	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-90685-2

Date Collected: 05/29/19 11:00

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			281171	06/10/19 10:55	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 12:49	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			285918	07/24/19 13:58	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	280678	06/04/19 13:08	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			282566	05/29/19 11:00	FDS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-02

Lab Sample ID: 180-90685-3

Date Collected: 05/29/19 09:05

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			281171	06/10/19 11:11	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 12:51	JAP	TAL PEN
Instrument ID: HYDRA AA2										
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			285918	07/24/19 14:02	RSK	TAL PIT
Instrument ID: A										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Client Sample ID: DUP-02

Lab Sample ID: 180-90685-3

Date Collected: 05/29/19 09:05

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	280678	06/04/19 13:08	AVS	TAL PIT

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PEN

Batch Type: Prep

JAP = Jane Parker

Batch Type: Analysis

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

RSK = Robert Kurtz

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Client Sample ID: PZ-1

Lab Sample ID: 180-90685-1

Date Collected: 05/29/19 10:05

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8		1.0	0.71	mg/L			06/10/19 10:08	1
Fluoride	<0.026		0.20	0.026	mg/L			06/10/19 10:08	1
Sulfate	2.1		1.0	0.38	mg/L			06/10/19 10:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:47	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00037	J	0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 13:55	1
Barium	0.040		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 13:55	1
Beryllium	0.00019	J	0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 13:55	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:55	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 13:55	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 13:55	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 13:55	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:55	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 13:55	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 13:55	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:55	1
Lithium	0.0062		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 13:55	1
Calcium	7.0		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 13:55	1
Boron	0.034	J	0.080	0.030	mg/L		07/23/19 13:09	07/24/19 13:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			06/04/19 13:08	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.31				SU			05/29/19 10:05	1

Client Sample ID: PZ-2

Lab Sample ID: 180-90685-2

Date Collected: 05/29/19 11:00

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.71	mg/L			06/10/19 10:55	1
Fluoride	0.042	J	0.20	0.026	mg/L			06/10/19 10:55	1
Sulfate	1.2		1.0	0.38	mg/L			06/10/19 10:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:49	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011		0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 13:58	1
Barium	0.091		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 13:58	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Client Sample ID: PZ-2

Lab Sample ID: 180-90685-2

Date Collected: 05/29/19 11:00

Matrix: Water

Date Received: 05/30/19 15:50

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 13:58	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:58	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 13:58	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 13:58	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 13:58	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:58	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 13:58	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 13:58	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:58	1
Lithium	0.015		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 13:58	1
Calcium	15		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 13:58	1
Boron	0.044	J	0.080	0.030	mg/L		07/23/19 13:09	07/24/19 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		10	10	mg/L			06/04/19 13:08	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.60				SU			05/29/19 11:00	1

Client Sample ID: DUP-02

Lab Sample ID: 180-90685-3

Date Collected: 05/29/19 09:05

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.7		1.0	0.71	mg/L			06/10/19 11:11	1
Fluoride	0.026	J	0.20	0.026	mg/L			06/10/19 11:11	1
Sulfate	2.0		1.0	0.38	mg/L			06/10/19 11:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:51	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00059	J	0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 14:02	1
Barium	0.075		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 14:02	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 14:02	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:02	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 14:02	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 14:02	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 14:02	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:02	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 14:02	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 14:02	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:02	1
Lithium	0.010		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 14:02	1
Calcium	13		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 14:02	1
Boron	<0.030		0.080	0.030	mg/L		07/23/19 13:09	07/24/19 14:02	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Client Sample ID: DUP-02
Date Collected: 05/29/19 09:05
Date Received: 05/30/19 15:50

Lab Sample ID: 180-90685-3
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		10	10	mg/L			06/04/19 13:08	1

- 1
- 2
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QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-281171/6
Matrix: Water
Analysis Batch: 281171

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/10/19 06:26	1
Fluoride	<0.026		0.20	0.026	mg/L			06/10/19 06:26	1
Sulfate	<0.38		1.0	0.38	mg/L			06/10/19 06:26	1

Lab Sample ID: LCS 180-281171/5
Matrix: Water
Analysis Batch: 281171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.5		mg/L		102	90 - 110
Fluoride	1.25	1.26		mg/L		101	90 - 110
Sulfate	25.0	25.6		mg/L		102	90 - 110

Lab Sample ID: 180-90685-1 MS
Matrix: Water
Analysis Batch: 281171

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.8		25.0	34.7		mg/L		104	80 - 120
Fluoride	<0.026		1.25	1.47		mg/L		117	80 - 120
Sulfate	2.1		25.0	27.9		mg/L		103	80 - 120

Lab Sample ID: 180-90685-1 MSD
Matrix: Water
Analysis Batch: 281171

Client Sample ID: PZ-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.8		25.0	34.8		mg/L		104	80 - 120	0	20
Fluoride	<0.026		1.25	1.46		mg/L		117	80 - 120	0	20
Sulfate	2.1		25.0	28.0		mg/L		103	80 - 120	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-443438/14-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:34	1

Lab Sample ID: LCS 400-443438/15-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 443438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000870		mg/L		86	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-285700/1-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 13:38	1
Barium	<0.0015		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 13:38	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 13:38	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 13:38	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lithium	<0.0031		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 13:38	1
Calcium	<0.12		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 13:38	1
Boron	<0.030		0.080	0.030	mg/L		07/23/19 13:09	07/24/19 13:38	1

Lab Sample ID: LCS 180-285700/2-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	0.998		mg/L		100	80 - 120
Barium	1.00	1.10		mg/L		110	80 - 120
Beryllium	0.500	0.529		mg/L		106	80 - 120
Cadmium	0.500	0.530		mg/L		106	80 - 120
Cobalt	0.500	0.494		mg/L		99	80 - 120
Chromium	0.500	0.541		mg/L		108	80 - 120
Molybdenum	0.500	0.539		mg/L		108	80 - 120
Lead	0.500	0.535		mg/L		107	80 - 120
Antimony	0.250	0.272		mg/L		109	80 - 120
Selenium	1.00	1.05		mg/L		105	80 - 120
Thallium	1.00	1.11		mg/L		111	80 - 120
Lithium	0.500	0.525		mg/L		105	80 - 120
Calcium	25.0	27.7		mg/L		111	80 - 120
Boron	1.25	1.31		mg/L		105	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-280678/2
Matrix: Water
Analysis Batch: 280678

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/04/19 13:08	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-280678/1
Matrix: Water
Analysis Batch: 280678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	232		mg/L		115	80 - 120

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QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

HPLC/IC

Analysis Batch: 281171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total/NA	Water	300.0	
180-90685-2	PZ-2	Total/NA	Water	300.0	
180-90685-3	DUP-02	Total/NA	Water	300.0	
MB 180-281171/6	Method Blank	Total/NA	Water	300.0	
LCS 180-281171/5	Lab Control Sample	Total/NA	Water	300.0	
180-90685-1 MS	PZ-1	Total/NA	Water	300.0	
180-90685-1 MSD	PZ-1	Total/NA	Water	300.0	

Metals

Prep Batch: 285700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total Recoverable	Water	3005A	
180-90685-2	PZ-2	Total Recoverable	Water	3005A	
180-90685-3	DUP-02	Total Recoverable	Water	3005A	
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 285918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total Recoverable	Water	EPA 6020	285700
180-90685-2	PZ-2	Total Recoverable	Water	EPA 6020	285700
180-90685-3	DUP-02	Total Recoverable	Water	EPA 6020	285700
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	EPA 6020	285700
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	285700

Prep Batch: 443438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total/NA	Water	7470A	
180-90685-2	PZ-2	Total/NA	Water	7470A	
180-90685-3	DUP-02	Total/NA	Water	7470A	
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 443666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total/NA	Water	7470A	443438
180-90685-2	PZ-2	Total/NA	Water	7470A	443438
180-90685-3	DUP-02	Total/NA	Water	7470A	443438
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	443438
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	443438

General Chemistry

Analysis Batch: 280678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total/NA	Water	SM 2540C	
180-90685-2	PZ-2	Total/NA	Water	SM 2540C	
180-90685-3	DUP-02	Total/NA	Water	SM 2540C	
MB 180-280678/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-280678/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90685-1

Field Service / Mobile Lab

Analysis Batch: 282566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90685-1	PZ-1	Total/NA	Water	Field Sampling	
180-90685-2	PZ-2	Total/NA	Water	Field Sampling	

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ORIGIN ID: BIXA (850) 336-0192
RDH
RICK
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 29MAY19
ACTWGT: 58.90 LB
CAD: 006993799/SSFE2
DIMS: 24x15x15 IN
BILL THIRD PARTY



180-90685 Waybill

TO **SAMPLE RECEIVING
TEST AMERICA
301 APLHA DR RETURNS**

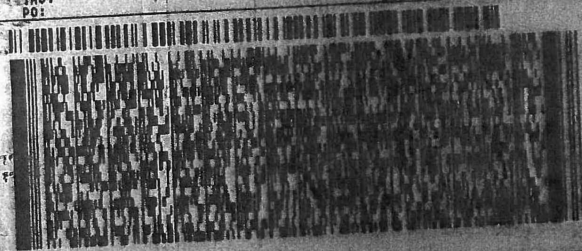
PITTSBURGH PA 15283

(412) 963-7068

THU:
PO:

REF:

DEPT:



FedEx
Express



2 of 2

MPS# 7875 4693 3448
0263

**THU - 30 MAY 10:30A
PRIORITY OVERNIGHT**

2 of 2

FedEx
MPS# 7875 4693 3448
0263

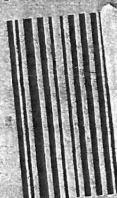
**FRI - 31 MAY 10:30A
PRIORITY OVERNIGHT**

65 AGCA

15238

PA-US

PIT



Uncorrected temp 8.3 °C
Thermometer ID 10

CF 0 Initials Melissa B

PT-WI-SR-001 effective 11/8/18

FID 106442 30MAY19 PITA 553C1/D66C/0C8A



Chain of Custody Record

Client Information (Sub Contract Lab)		Lab PM:	Bortot, Veronica	Carrier Tracking No(s):	COC No: 180-364730.1
Client Contact: Shipping/Receiving		Phone:	veronica.bortot@testamericainc.com	State of Origin:	Georgia
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):			
Address: 3355 McLemore Drive, Pensacola FL, 32514		Due Date Requested:	6/11/2019	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
City: Pensacola		TAT Requested (days):	6	Analysis Requested	
State, Zip: FL, 32514		PO #:		Total Number of containers	
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		WO #:		Perform MS/MSD (Yes or No)	
Email:		Project #:	18020186	Field Filtered Sample (Yes or No)	
Project Name: CCR - Plant Watson		SSOW#:		7470A/7470A_Prep	
Site:				5A5Ba,BeCd,Cr,Co,Cu,Pb,NI,Se,Ag,IV	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)
PZ-1 (180-90685-1)	5/29/19	10:05 Eastern	Water	X	X
PZ-2 (180-90685-2)	5/29/19	11:00 Eastern	Water	X	X
DUP-02 (180-90685-3)	5/29/19	09:05 Eastern	Water	X	X
Special Instructions/Note:					
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Special Instructions/QC Requirements:					
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Empty Kit Relinquished by:					
Relinquished by:		Date:	6/4/19 17:00	Company:	JA Pitt
Relinquished by:		Date/Time:	6-5-19 8:57	Company:	Received by: Melissa Hamidson
Relinquished by:		Date/Time:		Company:	Received by:
Relinquished by:		Date/Time:		Company:	Received by:
Custody Seals Intact:		Cooler Temperature(s) °C and Other Remarks: 5.0°C IAT 7			
Δ Yes Δ No					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90685-1

Login Number: 90685

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90685-1

Login Number: 90685
List Number: 3
Creator: Hinrichsen, Megan E

List Source: Eurofins TestAmerica, Pensacola
List Creation: 06/05/19 04:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90687-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
7/29/2019 1:38:34 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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TotalAccess

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Job ID: 180-90687-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-90687-1

Comments

No additional comments.

Receipt

The samples were received on 5/30/2019 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.6° C and 8.3° C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria. There was melted ice present in the cooler. EB-01 (180-90687-2). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020, 6020A: The following samples were diluted due to the nature of the sample matrix: (180-90689-C-1-D ^10), (180-90689-C-1-E MS ^10), (180-90689-C-1-F MSD ^10), (180-90689-C-1-D PDS ^10) and (180-90689-C-1-D SD ^50). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The following sample was diluted due to the nature of the sample matrix: PZ-3 (180-90687-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State		40150	06-30-19
Alabama	State Program	4	40150	06-30-20
ANAB	ISO/IEC 17025		L2471	02-22-20
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State		AZ0710	01-12-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State		2510	06-30-19
California	State Program	9	2510	06-30-19 *
Florida	NELAP	4	E81010	06-30-20 *
Florida	NELAP		E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-20
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19 *
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-20
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-20
Massachusetts	State Program	1	M-FL094	06-30-20
Michigan	State Program	5	9912	05-06-20
New Jersey	NELAP	2	FL006	06-30-20
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State		9810-186	08-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Pennsylvania	NELAP		68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19 *
Tennessee	State Program	4	TN02907	06-30-20
Texas	NELAP	6	T104704286-18-15	09-30-19
Texas	NELAP		T104704286	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-20
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90687-1	PZ-3	Water	05/29/19 09:10	05/30/19 15:50	
180-90687-2	EB-01	Water	05/29/19 08:15	05/30/19 15:50	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PEN
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-90687-1

Date Collected: 05/29/19 09:10

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			281171	06/10/19 11:42	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		100			281171	06/10/19 11:58	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 12:53	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			285918	07/24/19 14:05	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	280678	06/04/19 13:08	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			282566	05/29/19 09:10	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: EB-01

Lab Sample ID: 180-90687-2

Date Collected: 05/29/19 08:15

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			281171	06/10/19 09:36	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 12:55	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			285918	07/24/19 14:09	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	280678	06/04/19 13:08	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

JAP = Jane Parker

Batch Type: Analysis

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

RSK = Robert Kurtz

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-90687-1

Date Collected: 05/29/19 09:10

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4200		100	71	mg/L			06/10/19 11:58	100
Fluoride	<0.26		2.0	0.26	mg/L			06/10/19 11:42	10
Sulfate	830		10	3.8	mg/L			06/10/19 11:42	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:53	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.12		0.010	0.0032	mg/L		07/23/19 13:09	07/24/19 14:05	10
Barium	0.067	J	0.10	0.015	mg/L		07/23/19 13:09	07/24/19 14:05	10
Beryllium	<0.0016		0.010	0.0016	mg/L		07/23/19 13:09	07/24/19 14:05	10
Cadmium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:05	10
Cobalt	0.0022	J	0.0050	0.00075	mg/L		07/23/19 13:09	07/24/19 14:05	10
Chromium	<0.015		0.020	0.015	mg/L		07/23/19 13:09	07/24/19 14:05	10
Molybdenum	0.40		0.050	0.0061	mg/L		07/23/19 13:09	07/24/19 14:05	10
Lead	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:05	10
Antimony	<0.0038		0.020	0.0038	mg/L		07/23/19 13:09	07/24/19 14:05	10
Selenium	<0.026		0.050	0.026	mg/L		07/23/19 13:09	07/24/19 14:05	10
Thallium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:05	10
Lithium	0.055		0.050	0.031	mg/L		07/23/19 13:09	07/24/19 14:05	10
Calcium	450		5.0	1.2	mg/L		07/23/19 13:09	07/24/19 14:05	10
Boron	9.5		0.80	0.30	mg/L		07/23/19 13:09	07/24/19 14:05	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8600		100	100	mg/L			06/04/19 13:08	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.11				SU			05/29/19 09:10	1

Client Sample ID: EB-01

Lab Sample ID: 180-90687-2

Date Collected: 05/29/19 08:15

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/10/19 09:36	1
Fluoride	<0.026		0.20	0.026	mg/L			06/10/19 09:36	1
Sulfate	<0.38		1.0	0.38	mg/L			06/10/19 09:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:55	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 14:09	1
Barium	<0.0015		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 14:09	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Client Sample ID: EB-01

Lab Sample ID: 180-90687-2

Date Collected: 05/29/19 08:15

Matrix: Water

Date Received: 05/30/19 15:50

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 14:09	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:09	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 14:09	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 14:09	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 14:09	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:09	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 14:09	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 14:09	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 14:09	1
Lithium	<0.0031		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 14:09	1
Calcium	<0.12		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 14:09	1
Boron	<0.030		0.080	0.030	mg/L		07/23/19 13:09	07/24/19 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/04/19 13:08	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-281171/6
Matrix: Water
Analysis Batch: 281171

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/10/19 06:26	1
Fluoride	<0.026		0.20	0.026	mg/L			06/10/19 06:26	1
Sulfate	<0.38		1.0	0.38	mg/L			06/10/19 06:26	1

Lab Sample ID: LCS 180-281171/5
Matrix: Water
Analysis Batch: 281171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.5		mg/L		102	90 - 110
Fluoride	1.25	1.26		mg/L		101	90 - 110
Sulfate	25.0	25.6		mg/L		102	90 - 110

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-443438/14-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:34	1

Lab Sample ID: LCS 400-443438/15-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 443438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000870		mg/L		86	80 - 120

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-285700/1-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 13:38	1
Barium	<0.0015		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 13:38	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 13:38	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 13:38	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lithium	<0.0031		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 13:38	1
Calcium	<0.12		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 13:38	1
Boron	<0.030		0.080	0.030	mg/L		07/23/19 13:09	07/24/19 13:38	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: LCS 180-285700/2-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	0.998		mg/L		100	80 - 120
Barium	1.00	1.10		mg/L		110	80 - 120
Beryllium	0.500	0.529		mg/L		106	80 - 120
Cadmium	0.500	0.530		mg/L		106	80 - 120
Cobalt	0.500	0.494		mg/L		99	80 - 120
Chromium	0.500	0.541		mg/L		108	80 - 120
Molybdenum	0.500	0.539		mg/L		108	80 - 120
Lead	0.500	0.535		mg/L		107	80 - 120
Antimony	0.250	0.272		mg/L		109	80 - 120
Selenium	1.00	1.05		mg/L		105	80 - 120
Thallium	1.00	1.11		mg/L		111	80 - 120
Lithium	0.500	0.525		mg/L		105	80 - 120
Calcium	25.0	27.7		mg/L		111	80 - 120
Boron	1.25	1.31		mg/L		105	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-280678/2
Matrix: Water
Analysis Batch: 280678

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/04/19 13:08	1

Lab Sample ID: LCS 180-280678/1
Matrix: Water
Analysis Batch: 280678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	232		mg/L		115	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90687-1
SDG: 1

HPLC/IC

Analysis Batch: 281171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total/NA	Water	300.0	
180-90687-1	PZ-3	Total/NA	Water	300.0	
180-90687-2	EB-01	Total/NA	Water	300.0	
MB 180-281171/6	Method Blank	Total/NA	Water	300.0	
LCS 180-281171/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 285700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total Recoverable	Water	3005A	
180-90687-2	EB-01	Total Recoverable	Water	3005A	
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 285918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total Recoverable	Water	EPA 6020	285700
180-90687-2	EB-01	Total Recoverable	Water	EPA 6020	285700
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	EPA 6020	285700
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	285700

Prep Batch: 443438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total/NA	Water	7470A	
180-90687-2	EB-01	Total/NA	Water	7470A	
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 443666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total/NA	Water	7470A	443438
180-90687-2	EB-01	Total/NA	Water	7470A	443438
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	443438
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	443438

General Chemistry

Analysis Batch: 280678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total/NA	Water	SM 2540C	
180-90687-2	EB-01	Total/NA	Water	SM 2540C	
MB 180-280678/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-280678/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 282566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90687-1	PZ-3	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Chain of Custody Record

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: SCS:10382606 Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site:		Lab PM: Borbot, Veronica E-Mail: veronica.borbot@testamericainc.com Due Date Requested: TAT Requested (days): PO #: SCS:10382606 WO #: Project #: 18020186 SSOW#:		Sampler: Philip Evans Phone: 850-336-0192		Carrier Tracking No(s): COC No: 180-50462-10589.1 Page: 4 Page 4 of 5 Job #:									
Analysis Requested				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)											
Sample Identification Sample Date: 5/29/19 0910 Sample Time: 5/29/19 0815 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wast/woil, BT=BTAB, AC=AC): Water				Field Filtered Sample (Yes/No): 6020_7470A 2540C_Calcd, 300_ORGM_28D 9315_Ra226, 9320_Ra228				Total Number of Containers:							
Sample ID: PB-3 EB-01				Preservation Code:				Special Instructions/Note: 180-90687 Chain of Custody							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological								Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)								Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date: 5/29/19 1130				Method of Shipment:							
Relinquished by:				Date/Time: 5/29/19 1550				Received by:							
Relinquished by:				Date/Time:				Received by:							
Relinquished by:				Date/Time:				Received by:							
Custody Seals Intact:				Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:							



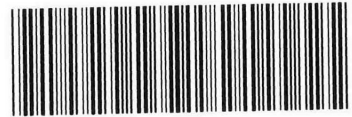
Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Bortol, Veronica		Lab PM: Bortol, Veronica		Carrier Tracking No(s): 400-216002.1						
Client Contact: Shipping/Receiving		Phone: veronica.bortol@testamericainc.com		E-Mail: veronica.bortol@testamericainc.com		State of Origin: Georgia						
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-90687-1		Preservation Codes:						
Address: 301 Alpha Drive, RIDC Park, Pittsburgh PA, 15238		Due Date Requested: 6/11/2019		TAT Requested (days):		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Other:						
Project Name: CCR - Plant Watson		Project #: 18020186		PO #:		Analysis Requested						
Site:		SSOW#:		WO #:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:						
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=issue, A=air)	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	2540C Calc'd	300_ORGFM_28D/ Chloride, Fluoride, Sulfate	FieldSampling (MOD) Local Method	6020/3005A (MOD) SbaBa,BeCd,Cr,Co,CuPbNi,Se,Ag,Tl,V	Total Number of Containers	Special Instructions/Note:
PZ-3 (180-90687-1)	5/29/19	09:10 Eastern	Water	Water	X	X	X	X	X	X	1	Return to Client
EB-01 (180-90687-2)	5/29/19	08:15 Eastern	Water	Water	X	X	X	X	X	X	1	Return to Client
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.												
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date: Company:												
Relinquished by: <i>R. C. Currey</i> Date: <i>7-19-19</i> 1600 Company: <i>TA-Pen</i> Relinquished by: Date: Company: Relinquished by: Date: Company:												
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No												



- 1
- 2
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- 11
- 12
- 13



180-90687 Waybill

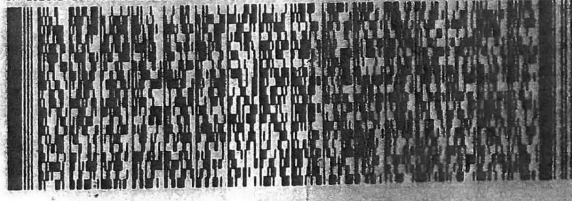
ORIGIN ID:BIKA (850) 336-0192
 RDH
 RICK
 301 ALPHA DR
 PITTSBURGH, PA 15238
 UNITED STATES US

SHIP DATE: 29MAY19
 ACTWGT: 61.30 LB
 CAD: 006993799/SSFE2002
 DIMS: 24x15x15 IN
 BILL THIRD PARTY

DATE: 15/05/19 08:27:59/17:55 12/19

TO **SAMPLE RECEIVING
 TEST AMERICA
 301 APLHA DR RETURNS
 PITTSBURGH PA 15283**

(412) 963-7058 REF:
 INU: DEPT:



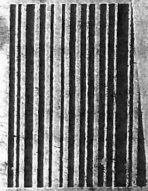
1 of 2
 TRK# 7875 4693 3437 THU - 30 MAY 10:30A
 PRIORITY OVERNIGHT

FedEx
 TRK# 7875 4693 3437 THU - 30 MAY 10:30A
 PRIORITY OVERNIGHT

65 AGCA 15238
 °C US
 T

Uncorrected temp 1.6
 Thermometer ID 10
 CF 0 Initials J3

PT-WI-SR-001 effective 11/8/19



FID 108442 58 MAY 19 META 5301/D66C/9C8A

ORIGIN ID: BIXA (850) 336-0192
RDH
RICK
301 ALPHA DR

PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 29MAY19
ACTWGT: 58.90 LB
CAD: 006993799/SSFE2002
DIMS: 24x15x15 IN
BILL THIRD PARTY

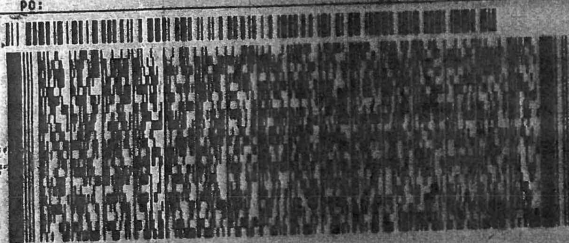
TO **SAMPLE RECEIVING**
TEST AMERICA
301 APLHA DR RETURNS

PITTSBURGH PA 15283

(412) 983-7058

REF:

DEPT:



FedEx
Express



11510101070101

2 of 2

MPS# 7875 4693 3448
0263

THU - 30 MAY 10:30A
PRIORITY OVERNIGHT

2 of 2

FedEx
MPS# 7875 4693 3448
0263

FRI - 31 MAY 10:30A
PRIORITY OVERNIGHT

65 AGCA

15238

PA-US
PIT

Uncorrected temp 8.3 °C
Thermometer ID 10

CF 0 Melted Initials FB

PT-WI-SR-001 effective 11/8/18

FTD 106442 30MAY19 PITA 553C1/D66C/0C8A

Chain of Custody Record



Client Information (Sub Contract Lab) Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State/Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Accreditations Required (See note):	
Due Date Requested: 6/11/2019 TAT Requested (days):		Carrier Tracking No(s): 180-364730.1 State of Origin: Georgia Page: Page 1 of 1 Job #: 180-90687-1	
Project Name: CCR - Plant Watson Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample ID (Lab ID) PZ-3 (180-90687-1) EB-01 (180-90687-2)		Analysis Requested Total Number of containers: 1	
Sample Date 5/29/19 5/29/19	Sample Time 09:10 Eastern 08:15 Eastern	Sample Type (C=comp, G=grab) Water Water	Matrix (W=water, S=solid, O=wastliq, BT=Tissue, A=Air) Water Water
Field Filtered Sample (Yes or No) X		Perform MS/MSD (Yes or No) X	
Preservation Code: 60203005A (MOD)		Special Instructions/Note: 7470A/7470A_Prep	
SAAsBa,BeCd,Cr,Co,CuPbNi,Se,AgTlV		Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.	
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2			
Relinquished by: [Signature] Date/Time: 6/4/19 1700		Relinquished by: [Signature] Date/Time: 6-5-19 857	
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:	
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 5.2°C D127	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90687-1

SDG Number: 1

Login Number: 90687

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90687-1

SDG Number: 1

Login Number: 90687

List Number: 3

Creator: Hinrichsen, Megan E

List Source: Eurofins TestAmerica, Pensacola

List Creation: 06/05/19 04:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-90690-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
7/29/2019 1:57:17 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Job ID: 180-90690-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-90690-1

Comments

No additional comments.

Receipt

The samples were received on 5/30/2019 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020, 6020A: The following samples were diluted due to the nature of the sample matrix: APMW-1R (180-90690-1), DUP-01 (180-90690-2), (180-90689-C-1-D ^10), (180-90689-C-1-E MS ^10), (180-90689-C-1-F MSD ^10), (180-90689-C-1-D PDS ^10) and (180-90689-C-1-D SD ^50). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State		40150	06-30-19
Alabama	State Program	4	40150	06-30-20
ANAB	ISO/IEC 17025		L2471	02-22-20
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State		AZ0710	01-12-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State		2510	06-30-19
California	State Program	9	2510	06-30-19 *
Florida	NELAP	4	E81010	06-30-20 *
Florida	NELAP		E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-20
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19 *
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-20
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-20
Massachusetts	State Program	1	M-FL094	06-30-20
Michigan	State Program	5	9912	05-06-20
New Jersey	NELAP	2	FL006	06-30-20
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State		9810-186	08-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Pennsylvania	NELAP		68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19 *
Tennessee	State Program	4	TN02907	06-30-20
Texas	NELAP	6	T104704286-18-15	09-30-19
Texas	NELAP		T104704286	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-20
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-20
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-90690-1	APMW-1R	Water	05/28/19 14:20	05/30/19 15:50	
180-90690-2	DUP-01	Water	05/28/19 13:20	05/30/19 15:50	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PEN
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-90690-1

Date Collected: 05/28/19 14:20

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			281304	06/11/19 09:59	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		50			281304	06/11/19 10:15	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 13:00	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			285918	07/24/19 14:39	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	280418	06/01/19 10:09	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			282566	05/28/19 14:20	FDS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01

Lab Sample ID: 180-90690-2

Date Collected: 05/28/19 13:20

Matrix: Water

Date Received: 05/30/19 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			281304	06/11/19 10:31	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		50			281304	06/11/19 10:47	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Prep	7470A			40 mL	40 mL	443438	06/06/19 09:12	JAP	TAL PEN
Total/NA	Analysis	7470A		1			443666	06/07/19 13:06	JAP	TAL PEN
	Instrument ID: HYDRA AA2									
Total Recoverable	Prep	3005A			50 mL	50 mL	285700	07/23/19 13:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			285918	07/24/19 14:42	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	280418	06/01/19 10:09	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Analyst References:

Lab: TAL PEN

Batch Type: Prep

JAP = Jane Parker

Batch Type: Analysis

JAP = Jane Parker

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

FDS = Sampler Field

MJH = Matthew Hartman

RSK = Robert Kurtz

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Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-90690-1

Date Collected: 05/28/19 14:20

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			06/11/19 10:15	50
Fluoride	0.16	J	1.0	0.13	mg/L			06/11/19 09:59	5
Sulfate	9.4		5.0	1.9	mg/L			06/11/19 09:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 13:00	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0032		0.010	0.0032	mg/L		07/23/19 13:09	07/24/19 14:39	10
Barium	1.0		0.10	0.015	mg/L		07/23/19 13:09	07/24/19 14:39	10
Beryllium	<0.0016		0.010	0.0016	mg/L		07/23/19 13:09	07/24/19 14:39	10
Cadmium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:39	10
Cobalt	<0.00075		0.0050	0.00075	mg/L		07/23/19 13:09	07/24/19 14:39	10
Chromium	<0.015		0.020	0.015	mg/L		07/23/19 13:09	07/24/19 14:39	10
Molybdenum	<0.0061		0.050	0.0061	mg/L		07/23/19 13:09	07/24/19 14:39	10
Lead	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:39	10
Antimony	<0.0038		0.020	0.0038	mg/L		07/23/19 13:09	07/24/19 14:39	10
Selenium	<0.026		0.050	0.026	mg/L		07/23/19 13:09	07/24/19 14:39	10
Thallium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:39	10
Lithium	<0.031		0.050	0.031	mg/L		07/23/19 13:09	07/24/19 14:39	10
Calcium	150		5.0	1.2	mg/L		07/23/19 13:09	07/24/19 14:39	10
Boron	5.7		0.80	0.30	mg/L		07/23/19 13:09	07/24/19 14:39	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3500		40	40	mg/L			06/01/19 10:09	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.56				SU			05/28/19 14:20	1

Client Sample ID: DUP-01

Lab Sample ID: 180-90690-2

Date Collected: 05/28/19 13:20

Matrix: Water

Date Received: 05/30/19 15:50

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		50	36	mg/L			06/11/19 10:47	50
Fluoride	0.15	J	1.0	0.13	mg/L			06/11/19 10:31	5
Sulfate	9.5		5.0	1.9	mg/L			06/11/19 10:31	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 13:06	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0032		0.010	0.0032	mg/L		07/23/19 13:09	07/24/19 14:42	10
Barium	1.0		0.10	0.015	mg/L		07/23/19 13:09	07/24/19 14:42	10

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Client Sample ID: DUP-01
Date Collected: 05/28/19 13:20
Date Received: 05/30/19 15:50

Lab Sample ID: 180-90690-2
Matrix: Water

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0016		0.010	0.0016	mg/L		07/23/19 13:09	07/24/19 14:42	10
Cadmium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:42	10
Cobalt	<0.00075		0.0050	0.00075	mg/L		07/23/19 13:09	07/24/19 14:42	10
Chromium	<0.015		0.020	0.015	mg/L		07/23/19 13:09	07/24/19 14:42	10
Molybdenum	<0.0061		0.050	0.0061	mg/L		07/23/19 13:09	07/24/19 14:42	10
Lead	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:42	10
Antimony	<0.0038		0.020	0.0038	mg/L		07/23/19 13:09	07/24/19 14:42	10
Selenium	<0.026		0.050	0.026	mg/L		07/23/19 13:09	07/24/19 14:42	10
Thallium	<0.0013		0.010	0.0013	mg/L		07/23/19 13:09	07/24/19 14:42	10
Lithium	<0.031		0.050	0.031	mg/L		07/23/19 13:09	07/24/19 14:42	10
Calcium	150		5.0	1.2	mg/L		07/23/19 13:09	07/24/19 14:42	10
Boron	5.6		0.80	0.30	mg/L		07/23/19 13:09	07/24/19 14:42	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3500		40	40	mg/L			06/01/19 10:09	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-281304/6
Matrix: Water
Analysis Batch: 281304

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/11/19 05:10	1
Fluoride	<0.026		0.20	0.026	mg/L			06/11/19 05:10	1
Sulfate	<0.38		1.0	0.38	mg/L			06/11/19 05:10	1

Lab Sample ID: LCS 180-281304/5
Matrix: Water
Analysis Batch: 281304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.2		mg/L		101	90 - 110
Fluoride	1.25	1.25		mg/L		100	90 - 110
Sulfate	25.0	25.3		mg/L		101	90 - 110

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-443438/14-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/06/19 09:12	06/07/19 12:34	1

Lab Sample ID: LCS 400-443438/15-A
Matrix: Water
Analysis Batch: 443666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 443438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000870		mg/L		86	80 - 120

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-285700/1-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		07/23/19 13:09	07/24/19 13:38	1
Barium	<0.0015		0.010	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/23/19 13:09	07/24/19 13:38	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/23/19 13:09	07/24/19 13:38	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/23/19 13:09	07/24/19 13:38	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/23/19 13:09	07/24/19 13:38	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/23/19 13:09	07/24/19 13:38	1
Lithium	<0.0031		0.0050	0.0031	mg/L		07/23/19 13:09	07/24/19 13:38	1
Calcium	<0.12		0.50	0.12	mg/L		07/23/19 13:09	07/24/19 13:38	1
Boron	<0.030		0.080	0.030	mg/L		07/23/19 13:09	07/24/19 13:38	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
 SDG: 1

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: LCS 180-285700/2-A
Matrix: Water
Analysis Batch: 285918

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 285700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	0.998		mg/L		100	80 - 120
Barium	1.00	1.10		mg/L		110	80 - 120
Beryllium	0.500	0.529		mg/L		106	80 - 120
Cadmium	0.500	0.530		mg/L		106	80 - 120
Cobalt	0.500	0.494		mg/L		99	80 - 120
Chromium	0.500	0.541		mg/L		108	80 - 120
Molybdenum	0.500	0.539		mg/L		108	80 - 120
Lead	0.500	0.535		mg/L		107	80 - 120
Antimony	0.250	0.272		mg/L		109	80 - 120
Selenium	1.00	1.05		mg/L		105	80 - 120
Thallium	1.00	1.11		mg/L		111	80 - 120
Lithium	0.500	0.525		mg/L		105	80 - 120
Calcium	25.0	27.7		mg/L		111	80 - 120
Boron	1.25	1.31		mg/L		105	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-280418/2
Matrix: Water
Analysis Batch: 280418

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/01/19 10:09	1

Lab Sample ID: LCS 180-280418/1
Matrix: Water
Analysis Batch: 280418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	188		mg/L		94	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-90690-1
SDG: 1

HPLC/IC

Analysis Batch: 281304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total/NA	Water	300.0	
180-90690-1	APMW-1R	Total/NA	Water	300.0	
180-90690-2	DUP-01	Total/NA	Water	300.0	
180-90690-2	DUP-01	Total/NA	Water	300.0	
MB 180-281304/6	Method Blank	Total/NA	Water	300.0	
LCS 180-281304/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 285700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total Recoverable	Water	3005A	
180-90690-2	DUP-01	Total Recoverable	Water	3005A	
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 285918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total Recoverable	Water	EPA 6020	285700
180-90690-2	DUP-01	Total Recoverable	Water	EPA 6020	285700
MB 180-285700/1-A	Method Blank	Total Recoverable	Water	EPA 6020	285700
LCS 180-285700/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	285700

Prep Batch: 443438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total/NA	Water	7470A	
180-90690-2	DUP-01	Total/NA	Water	7470A	
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 443666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total/NA	Water	7470A	443438
180-90690-2	DUP-01	Total/NA	Water	7470A	443438
MB 400-443438/14-A	Method Blank	Total/NA	Water	7470A	443438
LCS 400-443438/15-A	Lab Control Sample	Total/NA	Water	7470A	443438

General Chemistry

Analysis Batch: 280418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total/NA	Water	SM 2540C	
180-90690-2	DUP-01	Total/NA	Water	SM 2540C	
MB 180-280418/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-280418/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 282566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-90690-1	APMW-1R	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Chain of Custody Record



Client Information		Sampler: Philip Evans		Lab PM: Bortol, Veronica		Carrier Tracking No(s):		COC No: 180-50462-10589-1	
Client Contact: Corey Ledner		Phone: 850-336-0192		E-Mail: veronica.bortol@testamericainc.com		Page: 2 of 5		Page #:	
Company: Southern Company		Due Date Requested:		Analysis Requested		Job #:		Preservation Codes:	
Address: PO BOX 2641 GSC8		TAT Requested (days):		6020_7470A		9315_Ra226_9320_Ra228		A - HCL M - Hexane N - None O - AsNaO2 P - Na2OAS Q - NaZSO3 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (Specify)	
City: Birmingham		PO #: SCS10382606		25400_Calcd_300_ORGFM_28D		9315_Ra226_9320_Ra228		B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
State, Zip: AL, 35291		WO #: 18020186		6020_7470A		9315_Ra226_9320_Ra228		Special Instructions/Note:	
Phone:		Project #: 18020186		X X Y		9315_Ra226_9320_Ra228		Barcode:	
Email: X2CTLADN@SOUTHERNCO.COM		SSOW#:		X X Y		9315_Ra226_9320_Ra228		180-90690 Chain of Custody	
Address: CCR - Plant Watson		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, B=BTX/air, A=Air)	
City: Birmingham		5/28/19		1420		G		Water	
State, Zip: AL, 35291		5/28/19		1320		G		Water	
Phone:								Water	
Email: X2CTLADN@SOUTHERNCO.COM								Water	
Address: CCR - Plant Watson								Water	
City: Birmingham								Water	
State, Zip: AL, 35291								Water	
Phone:								Water	
Email: X2CTLADN@SOUTHERNCO.COM								Water	
Address: CCR - Plant Watson								Water	
City: Birmingham								Water	
State, Zip: AL, 35291								Water	
Phone:								Water	
Email: X2CTLADN@SOUTHERNCO.COM								Water	
Address: CCR - Plant Watson								Water	
City: Birmingham								Water	
State, Zip: AL, 35291								Water	
Phone:								Water	
Email: X2CTLADN@SOUTHERNCO.COM								Water	
Address: CCR - Plant Watson								Water	
City: Birmingham								Water	
State, Zip: AL, 35291								Water	
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Email: X2CTLADN@SOUTHERNCO.COM								Water	
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City: Birmingham								Water	
State, Zip: AL, 35291								Water	
Phone:								Water	
Email: X2CTLADN@SOUTHERNCO.COM								Water	
Address: CCR - Plant Watson									



ORIGIN ID:BIXA (850) 336-0192
RDH
RICK
301 ALPHA DR

SHIP DATE: 29MAY19
ACTWGT: 61.30 LB
CAD: 006993799/SSFE2002
DIMS: 24x15x15 IN

PITTSBURGH, PA 15238
UNITED STATES US

BILL THIRD PARTY

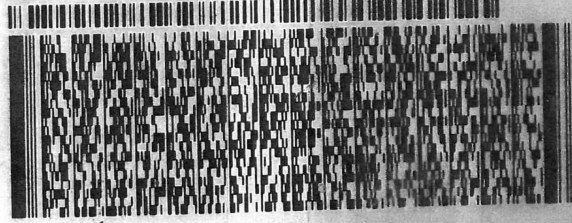
TO **SAMPLE RECEIVING
TEST AMERICA
301 APLHA DR RETURNS**

PITTSBURGH PA 15283

(412) 963-7058
THU:
PO:

REF:

DEPT:



**FedEx
Express**



1 of 2
TRK# 7875 4693 3437

**THU - 30 MAY 10:30A
PRIORITY OVERNIGHT**

FedEx
TRK# 7875 4693 3437
0201

**THU - 30 MAY 10:30A
PRIORITY OVERNIGHT**

65 AGCA

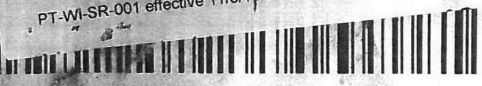
15238

Uncorrected temp
Thermometer ID

1.6
1.0
°C - US
T

CF 0 Initials TB

PT-WI-SR-001 effective 11/8/18



FID 106442 30MAY19 PITA 553C1/D66C/0C8A

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Eurofins TestAmerica, Pittsburgh
 301 Alpha Drive RIDC Park
 Pittsburgh, PA 15238
 Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record



Environment Testing
 TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab Pin:	Carrier Tracking No(s):	COC No:						
Client Contact:	Shipping/Receiving:	Phone:	Bortol, Veronica	180-364723.1	180-364723.1						
Company:	TestAmerica Laboratories, Inc.	E-mail:	veronica.bortol@testamericainc.com	State of Origin:	Georgia						
Address:	13715 Rider Trail North	Due Date Requested:	6/1/2019	Accreditations Required (See note):	180-90690-1						
City:	Earth City	TAT Requested (days):		Job #:							
State, Zip:	MO, 63045	PO #:		Project #:	18020186						
Phone:	314-298-8566(Tel) 314-298-8757(Fax)	W.O. #:		SSOW #:							
Email:		Project Name:	CCR - Plant Watson	Project #:	18020186						
		Site:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=soil, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:	
APMW-1R (180-90690-1)		5/28/19	14:20 Eastern	Water	Water		X		1		
DUP-01 (180-90690-2)		5/28/19	13:20 Eastern	Water	Water		X		1		
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>											
Possible Hazard Identification		Unconfirmed		Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:							
Relinquished by:		Date/Time:	5/19/19	17:00	Company:	Company:	Received by:	Date/Time:	6-5-19	08:55	Company:
Relinquished by:		Date/Time:			Company:	Company:	Received by:	Date/Time:			Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

Chain of Custody Record



Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:		Lab PVI: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Accreditations Required (See note):		Carrier Tracking No(s): State of Origin: Georgia Page 1 of 1 Job #: 180-90690-1		COC No: 180-364730.1	
Due Date Requested: 6/11/2019 TAT Requested (days):		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaZSO3 R - NaZSO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
PO #: _____ WO #: _____ Project #: 18020186 SOW#: _____		Field Filtered Sample (Yes or No) _____ Perform MS/MSD (Yes or No) _____ 60203005A (MOD) 7470A/7470A_Prep		Total Number of containers		Special Instructions/Note:	
Sample Identification - Client ID (Lab ID)		Matrix (W=water, S=solid, O=wastewat, BT=Tissue, A=Air) Sample Type (C=comp, G=grab) Sample Time Sample Date Preservation Code:		X X X X		1 1	
APMW-1R (180-90690-1) DUP-01 (180-90690-2)		Water Water		14:20 Eastern 13:20 Eastern		1 1	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.							
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Relinquished by: _____ Date/Time: 6/19/19 1700 Company: TA		Relinquished by: _____ Date/Time: _____ Company: _____		Relinquished by: _____ Date/Time: _____ Company: _____		Relinquished by: _____ Date/Time: _____ Company: _____	
Custody Seals Intact: _____ Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 5.2°C 2K7		Received by: _____ Date/Time: 6-5-19 857 Company: TA		Received by: _____ Date/Time: _____ Company: _____	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90690-1

SDG Number: 1

Login Number: 90690

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-90690-1

SDG Number: 1

Login Number: 90690

List Number: 3

Creator: Hinrichsen, Megan E

List Source: Eurofins TestAmerica, Pensacola

List Creation: 06/05/19 04:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91281-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
7/31/2019 5:01:40 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Job ID: 180-91281-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-91281-1

Comments

No additional comments.

Receipt

The samples were received on 6/13/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 2.3° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The following samples were diluted due to the high concentration of sodium in the sample matrix: PZ-3 (180-91281-1) and PZ-4 (180-91281-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91281-1	PZ-3	Water	06/12/19 16:45	06/13/19 09:00	
180-91281-3	EB-01	Water	06/12/19 16:21	06/13/19 09:00	
180-91281-4	FB-01	Water	06/12/19 16:11	06/13/19 09:00	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-91281-1

Date Collected: 06/12/19 16:45

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			282583	06/22/19 21:12	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Analysis	300.0		100			282583	06/22/19 21:28	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	282187	06/19/19 07:20	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			282967	06/25/19 11:34	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	282145	06/18/19 16:37	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282508	06/20/19 18:19	KAK	TAL PIT
	Instrument ID: HGY									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282278	06/19/19 15:11	AVS	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Field Sampling		1			283267	06/12/19 16:45	NJD	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: EB-01

Lab Sample ID: 180-91281-3

Date Collected: 06/12/19 16:21

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			282583	06/22/19 17:38	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	282187	06/19/19 07:20	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			282967	06/25/19 12:02	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	282145	06/18/19 16:37	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282508	06/20/19 18:22	KAK	TAL PIT
	Instrument ID: HGY									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282278	06/19/19 15:11	AVS	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: FB-01

Lab Sample ID: 180-91281-4

Date Collected: 06/12/19 16:11

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			282583	06/22/19 17:53	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	282187	06/19/19 07:20	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			282967	06/25/19 11:58	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	282145	06/18/19 16:37	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282508	06/20/19 18:23	KAK	TAL PIT
	Instrument ID: HGY									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Client Sample ID: FB-01

Lab Sample ID: 180-91281-4

Date Collected: 06/12/19 16:11

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282278	06/19/19 15:11	AVS	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

JJZ = Joseph Zubrow

RJR = Ron Rosenbaum

Batch Type: Analysis

AVS = Abbey Smith

KAK = Kayla Kalamasz

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-91281-1

Date Collected: 06/12/19 16:45

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.26		2.0	0.26	mg/L			06/22/19 21:12	10
Chloride	4200		100	71	mg/L			06/22/19 21:28	100
Sulfate	830		10	3.8	mg/L			06/22/19 21:12	10

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.010	0.0032	mg/L		06/19/19 07:20	06/25/19 11:34	10
Barium	0.064	J	0.10	0.015	mg/L		06/19/19 07:20	06/25/19 11:34	10
Beryllium	<0.0016		0.010	0.0016	mg/L		06/19/19 07:20	06/25/19 11:34	10
Cadmium	<0.0013		0.010	0.0013	mg/L		06/19/19 07:20	06/25/19 11:34	10
Cobalt	0.0020	J	0.0050	0.00075	mg/L		06/19/19 07:20	06/25/19 11:34	10
Chromium	<0.015		0.020	0.015	mg/L		06/19/19 07:20	06/25/19 11:34	10
Molybdenum	0.34		0.050	0.0061	mg/L		06/19/19 07:20	06/25/19 11:34	10
Lead	<0.0013		0.010	0.0013	mg/L		06/19/19 07:20	06/25/19 11:34	10
Antimony	<0.0038		0.020	0.0038	mg/L		06/19/19 07:20	06/25/19 11:34	10
Selenium	<0.026		0.050	0.026	mg/L		06/19/19 07:20	06/25/19 11:34	10
Thallium	<0.0013		0.010	0.0013	mg/L		06/19/19 07:20	06/25/19 11:34	10
Lithium	0.062		0.050	0.031	mg/L		06/19/19 07:20	06/25/19 11:34	10
Calcium	440		5.0	1.2	mg/L		06/19/19 07:20	06/25/19 11:34	10
Boron	11		0.80	0.30	mg/L		06/19/19 07:20	06/25/19 11:34	10

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/18/19 16:37	06/20/19 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6800		100	100	mg/L			06/19/19 15:11	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.09				SU			06/12/19 16:45	1

Client Sample ID: EB-01

Lab Sample ID: 180-91281-3

Date Collected: 06/12/19 16:21

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 17:38	1
Chloride	<0.71		1.0	0.71	mg/L			06/22/19 17:38	1
Sulfate	<0.38		1.0	0.38	mg/L			06/22/19 17:38	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/19/19 07:20	06/25/19 12:02	1
Barium	<0.0015		0.010	0.0015	mg/L		06/19/19 07:20	06/25/19 12:02	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/19/19 07:20	06/25/19 12:02	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 12:02	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/19/19 07:20	06/25/19 12:02	1
Chromium	0.0021		0.0020	0.0015	mg/L		06/19/19 07:20	06/25/19 12:02	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Client Sample ID: EB-01
Date Collected: 06/12/19 16:21
Date Received: 06/13/19 09:00

Lab Sample ID: 180-91281-3
Matrix: Water

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/19/19 07:20	06/25/19 12:02	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 12:02	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/19/19 07:20	06/25/19 12:02	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/19/19 07:20	06/25/19 12:02	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 12:02	1
Lithium	<0.0031		0.0050	0.0031	mg/L		06/19/19 07:20	06/25/19 12:02	1
Calcium	<0.12		0.50	0.12	mg/L		06/19/19 07:20	06/25/19 12:02	1
Boron	0.036	J	0.080	0.030	mg/L		06/19/19 07:20	06/25/19 12:02	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/18/19 16:37	06/20/19 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/19/19 15:11	1

Client Sample ID: FB-01
Date Collected: 06/12/19 16:11
Date Received: 06/13/19 09:00

Lab Sample ID: 180-91281-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 17:53	1
Chloride	<0.71		1.0	0.71	mg/L			06/22/19 17:53	1
Sulfate	<0.38		1.0	0.38	mg/L			06/22/19 17:53	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/19/19 07:20	06/25/19 11:58	1
Barium	0.0023	J	0.010	0.0015	mg/L		06/19/19 07:20	06/25/19 11:58	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/19/19 07:20	06/25/19 11:58	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 11:58	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/19/19 07:20	06/25/19 11:58	1
Chromium	0.0022		0.0020	0.0015	mg/L		06/19/19 07:20	06/25/19 11:58	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/19/19 07:20	06/25/19 11:58	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 11:58	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/19/19 07:20	06/25/19 11:58	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/19/19 07:20	06/25/19 11:58	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 11:58	1
Lithium	0.0032	J	0.0050	0.0031	mg/L		06/19/19 07:20	06/25/19 11:58	1
Calcium	<0.12		0.50	0.12	mg/L		06/19/19 07:20	06/25/19 11:58	1
Boron	0.039	J	0.080	0.030	mg/L		06/19/19 07:20	06/25/19 11:58	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/18/19 16:37	06/20/19 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/19/19 15:11	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-282583/41
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 17:23	1
Chloride	<0.71		1.0	0.71	mg/L			06/22/19 17:23	1
Sulfate	<0.38		1.0	0.38	mg/L			06/22/19 17:23	1

Lab Sample ID: LCS 180-282583/40
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.30		mg/L		104	90 - 110
Chloride	25.0	26.4		mg/L		106	90 - 110
Sulfate	25.0	26.4		mg/L		106	90 - 110

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-282187/1-A
Matrix: Water
Analysis Batch: 282967

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 282187

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/19/19 07:20	06/25/19 10:28	1
Barium	<0.0015		0.010	0.0015	mg/L		06/19/19 07:20	06/25/19 10:28	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/19/19 07:20	06/25/19 10:28	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 10:28	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/19/19 07:20	06/25/19 10:28	1
Chromium	<0.0015		0.0020	0.0015	mg/L		06/19/19 07:20	06/25/19 10:28	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/19/19 07:20	06/25/19 10:28	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 10:28	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/19/19 07:20	06/25/19 10:28	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/19/19 07:20	06/25/19 10:28	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/19/19 07:20	06/25/19 10:28	1
Lithium	<0.0031		0.0050	0.0031	mg/L		06/19/19 07:20	06/25/19 10:28	1
Calcium	<0.12		0.50	0.12	mg/L		06/19/19 07:20	06/25/19 10:28	1
Boron	<0.030		0.080	0.030	mg/L		06/19/19 07:20	06/25/19 10:28	1

Lab Sample ID: LCS 180-282187/2-A
Matrix: Water
Analysis Batch: 282967

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.976		mg/L		98	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.470		mg/L		94	80 - 120
Cadmium	0.500	0.518		mg/L		104	80 - 120
Cobalt	0.500	0.488		mg/L		98	80 - 120
Chromium	0.500	0.518		mg/L		104	80 - 120
Molybdenum	0.500	0.518		mg/L		104	80 - 120
Lead	0.500	0.508		mg/L		102	80 - 120
Antimony	0.250	0.267		mg/L		107	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-282187/2-A
Matrix: Water
Analysis Batch: 282967

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	1.00		mg/L		100	80 - 120
Thallium	1.00	1.04		mg/L		104	80 - 120
Lithium	0.500	0.448		mg/L		90	80 - 120
Calcium	25.0	26.6		mg/L		106	80 - 120
Boron	1.25	1.12		mg/L		89	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-282145/1-A
Matrix: Water
Analysis Batch: 282508

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 282145

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/18/19 16:37	06/20/19 18:10	1

Lab Sample ID: LCS 180-282145/2-A
Matrix: Water
Analysis Batch: 282508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 282145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00253		mg/L		101	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-282278/2
Matrix: Water
Analysis Batch: 282278

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/19/19 15:11	1

Lab Sample ID: LCS 180-282278/1
Matrix: Water
Analysis Batch: 282278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	178		mg/L		89	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91281-1
SDG: 1

HPLC/IC

Analysis Batch: 282583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total/NA	Water	300.0	
180-91281-1	PZ-3	Total/NA	Water	300.0	
180-91281-3	EB-01	Total/NA	Water	300.0	
180-91281-4	FB-01	Total/NA	Water	300.0	

Metals

Prep Batch: 282145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total/NA	Water	7470A	
180-91281-3	EB-01	Total/NA	Water	7470A	
180-91281-4	FB-01	Total/NA	Water	7470A	

Prep Batch: 282187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total Recoverable	Water	3005A	
180-91281-3	EB-01	Total Recoverable	Water	3005A	
180-91281-4	FB-01	Total Recoverable	Water	3005A	

Analysis Batch: 282508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total/NA	Water	EPA 7470A	282145
180-91281-3	EB-01	Total/NA	Water	EPA 7470A	282145
180-91281-4	FB-01	Total/NA	Water	EPA 7470A	282145

Analysis Batch: 282967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total Recoverable	Water	EPA 6020	282187
180-91281-3	EB-01	Total Recoverable	Water	EPA 6020	282187
180-91281-4	FB-01	Total Recoverable	Water	EPA 6020	282187

General Chemistry

Analysis Batch: 282278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total/NA	Water	SM 2540C	
180-91281-3	EB-01	Total/NA	Water	SM 2540C	
180-91281-4	FB-01	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 283267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91281-1	PZ-3	Total/NA	Water	Field Sampling	

Client Information Client Contact: Corey Ladner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____		Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSOW#: _____		Sampler: <i>Luke Heyndrickx</i> Lab PM: Bortot, Veronica Phone: <i>856-336-0192</i> E-Mail: veronica.bortot@testamericainc.com		Carrier Tracking No(s): _____ COC No: 180-50463-10589.1 Page: Page 1 of 2 Job #: _____											
Sample Identification Sample ID: PZ-3 PZ-4 GD-01 FB-01		Sample Date: 6-12-19 6-12-19 6-12-19 6-12-19		Sample Time: 1645 1542 1621 1611		Sample Type (C=comp, G=grab): Water Water Water Water		Matrix (W=water, S=solid, O=organic, BT=tissue, A=air): Water Water Water Water		Field Entered Sample (Yes or No): X X X X		Analysis Requested: _____ 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGFM_28D 6020_7470A		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____		Special Instructions/Note: Total Number of Containers: _____ 180-91281 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____																	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																	
Special Instructions/QC Requirements: _____																	
Empty Kit Relinquished by: _____ Date: _____ Time: _____																	
Relinquished by: _____ Date/Time: 6-12-19 1743 Company: <i>ADIT EM</i>																	
Relinquished by: _____ Date/Time: _____ Company: _____																	
Relinquished by: _____ Date/Time: _____ Company: _____																	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: _____																	



ORIGIN ID:BIKA (850) 336-0192
RICK HAGENDORFER

301 ALPHA DR

PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 12JUN19
ACTWGT: 62.00 LB
CAD: 006993789/SSFE2002
DIMS: 23x13x13 IN

BILL THIRD PARTY

Part # 15621032/0123/1155 6/12/19

TO **EUROFINS TESTAMERICA PITTSBURG**
RIDC PARK
301 ALPHA DR

PITTSBURGH PA 15238

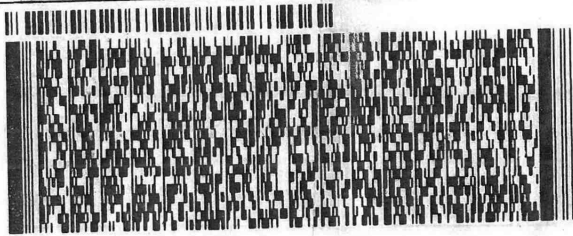
(412) 963-7058

REF:

DEPT:

SKU:

PO:



FedEx
Express



11010101010101010101

2 of 3

MPS# **7878 5086 0196**

0263 Mstr# **7878 5086 0185**

0201

XH AGCA

THU - 13 JUN 10:30A
PRIORITY OVERNIGHT

15238

PA-US **PIT**

Uncorrected temp	<u>23</u> °C
Thermometer ID	<u>16</u>
CF <u>0</u>	Initials <u>TS</u>
PT-WI-SR-001 effective 11/8/18	



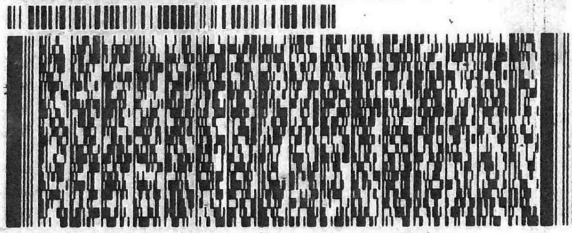
ORIGIN ID: BIXA (850) 336-0192
RICK HAGENDORFER
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 12 JUN 19
ACTWGT: 69.00 LB
CAD: 006993799/9SFE2002
DIMS: 23x13x13 IN
BILL THIRD PARTY

TO EUROFINS TESTAMERICA PITTSBURG
RIOC PARK
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068 REF:
INU: DEPT:
PO:



3 of 3
MPS# 7878 5086 0200
0263
Mstr# 7878 5086 0185

THU - 13 JUN 10:30A
PRIORITY OVERNIGHT

XH AGCA

15238
PA-US PIT

Uncorrected temp Thermometer ID
CF 0 Initials JS
PT-WI-SR-001 effective 11/8/16

LA	C
16	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-91281-1

SDG Number: 1

Login Number: 91281

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91282-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
241 Ralph McGill Blvd SE
B10185
Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:
8/1/2019 11:24:23 AM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Job ID: 180-91282-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-91282-1

Comments

No additional comments.

Receipt

The samples were received on 6/13/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 2.3° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91282-2	APMW-1R	Water	06/12/19 14:24	06/13/19 09:00	
180-91282-3	DUP-01	Water	06/12/19 09:00	06/13/19 09:00	

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- 2
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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-91282-2

Date Collected: 06/12/19 14:24

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			282583	06/22/19 18:55	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			282583	06/22/19 19:10	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	282349	06/20/19 09:10	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			283135	06/26/19 17:21	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282698	06/24/19 10:14	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282898	06/25/19 12:12	KAK	TAL PIT
Instrument ID: HGY										
Total/NA	Analysis	Field Sampling		1			283267	06/12/19 14:24	NJD	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: DUP-01

Lab Sample ID: 180-91282-3

Date Collected: 06/12/19 09:00

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			282583	06/22/19 19:56	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total/NA	Analysis	300.0		50			282583	06/22/19 20:11	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	282349	06/20/19 09:10	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			283135	06/26/19 17:25	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282698	06/24/19 10:14	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282898	06/25/19 12:13	KAK	TAL PIT
Instrument ID: HGY										

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

JJZ = Joseph Zubrow

RJR = Ron Rosenbaum

Batch Type: Analysis

KAK = Kayla Kalamasz

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Client Sample ID: APMW-1R

Lab Sample ID: 180-91282-2

Date Collected: 06/12/19 14:24

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.13		1.0	0.13	mg/L			06/22/19 18:55	5
Chloride	2000		50	36	mg/L			06/22/19 19:10	50
Sulfate	8.8		5.0	1.9	mg/L			06/22/19 18:55	5

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0023		0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:21	1
Barium	0.91		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:21	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:21	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:21	1
Cobalt	0.00037	J	0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:21	1
Chromium	0.0032		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:21	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:21	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:21	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:21	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:21	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:21	1
Lithium	0.012		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:21	1
Calcium	130		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:21	1
Boron	4.4		0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:21	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:12	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.69				SU			06/12/19 14:24	1

Client Sample ID: DUP-01

Lab Sample ID: 180-91282-3

Date Collected: 06/12/19 09:00

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.13		1.0	0.13	mg/L			06/22/19 19:56	5
Chloride	1800		50	36	mg/L			06/22/19 20:11	50
Sulfate	4.7	J	5.0	1.9	mg/L			06/22/19 19:56	5

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00065	J	0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:25	1
Barium	0.75		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:25	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:25	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:25	1
Cobalt	0.00024	J	0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:25	1
Chromium	0.0029		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:25	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:25	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:25	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:25	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:25	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
 SDG: 1

Client Sample ID: DUP-01
Date Collected: 06/12/19 09:00
Date Received: 06/13/19 09:00

Lab Sample ID: 180-91282-3
Matrix: Water

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:25	1
Lithium	0.011		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:25	1
Calcium	240		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:25	1
Boron	3.2		0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:25	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:13	1

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QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-282583/41
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 17:23	1
Chloride	<0.71		1.0	0.71	mg/L			06/22/19 17:23	1
Sulfate	<0.38		1.0	0.38	mg/L			06/22/19 17:23	1

Lab Sample ID: LCS 180-282583/40
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.30		mg/L		104	90 - 110
Chloride	25.0	26.4		mg/L		106	90 - 110
Sulfate	25.0	26.4		mg/L		106	90 - 110

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-282349/1-A
Matrix: Water
Analysis Batch: 283135

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 282349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:08	1
Barium	<0.0015		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:08	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:08	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:08	1
Chromium	<0.0015		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:08	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:08	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:08	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:08	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Lithium	<0.0031		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:08	1
Calcium	<0.12		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:08	1
Boron	<0.030		0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:08	1

Lab Sample ID: LCS 180-282349/2-A
Matrix: Water
Analysis Batch: 283135

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.04		mg/L		104	80 - 120
Barium	1.00	1.03		mg/L		103	80 - 120
Beryllium	0.500	0.582		mg/L		116	80 - 120
Cadmium	0.500	0.522		mg/L		104	80 - 120
Cobalt	0.500	0.507		mg/L		101	80 - 120
Chromium	0.500	0.528		mg/L		106	80 - 120
Molybdenum	0.500	0.535		mg/L		107	80 - 120
Lead	0.500	0.530		mg/L		106	80 - 120
Antimony	0.250	0.273		mg/L		109	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
 SDG: 1

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-282349/2-A
 Matrix: Water
 Analysis Batch: 283135

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 282349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Selenium	1.00	1.00		mg/L		100	80 - 120
Thallium	1.00	1.08		mg/L		108	80 - 120
Lithium	0.500	0.465		mg/L		93	80 - 120
Calcium	25.0	27.1		mg/L		109	80 - 120
Boron	1.25	1.09		mg/L		87	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-282698/1-A
 Matrix: Water
 Analysis Batch: 282898

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 282698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:08	1

Lab Sample ID: LCS 180-282698/2-A
 Matrix: Water
 Analysis Batch: 282898

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 282698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00250	0.00262		mg/L		105	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91282-1
SDG: 1

HPLC/IC

Analysis Batch: 282583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total/NA	Water	300.0	
180-91282-2	APMW-1R	Total/NA	Water	300.0	
180-91282-3	DUP-01	Total/NA	Water	300.0	
180-91282-3	DUP-01	Total/NA	Water	300.0	

Metals

Prep Batch: 282349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total Recoverable	Water	3005A	
180-91282-3	DUP-01	Total Recoverable	Water	3005A	

Prep Batch: 282698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total/NA	Water	7470A	
180-91282-3	DUP-01	Total/NA	Water	7470A	

Analysis Batch: 282898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total/NA	Water	EPA 7470A	282698
180-91282-3	DUP-01	Total/NA	Water	EPA 7470A	282698

Analysis Batch: 283135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total Recoverable	Water	EPA 6020	282349
180-91282-3	DUP-01	Total Recoverable	Water	EPA 6020	282349

Field Service / Mobile Lab

Analysis Batch: 283267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91282-2	APMW-1R	Total/NA	Water	Field Sampling	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-91282-1

SDG Number: 1

Login Number: 91282

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91283-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
8/1/2019 1:38:04 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

LINKS

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Job ID: 180-91283-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-91283-1

Revised : chloride and sulfate results added

Comments

No additional comments.

Receipt

The samples were received on 6/13/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 2.3° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
 SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
USDA	US Federal Programs		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91283-1	PZ-1	Water	06/12/19 14:40	06/13/19 09:00	
180-91283-2	PZ-2	Water	06/12/19 15:25	06/13/19 09:00	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-91283-1

Date Collected: 06/12/19 14:40

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	282583	06/22/19 18:09	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	282349	06/20/19 09:10	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			283135	06/26/19 17:31	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282698	06/24/19 10:14	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282898	06/25/19 12:14	KAK	TAL PIT
Instrument ID: HGY										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282278	06/19/19 15:11	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			283267	06/12/19 14:40	NJD	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: PZ-2

Lab Sample ID: 180-91283-2

Date Collected: 06/12/19 15:25

Matrix: Water

Date Received: 06/13/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	282583	06/22/19 20:26	MJH	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			50 mL	50 mL	282349	06/20/19 09:10	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			283135	06/26/19 17:35	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282698	06/24/19 10:14	JJZ	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282898	06/25/19 12:15	KAK	TAL PIT
Instrument ID: HGY										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282278	06/19/19 15:11	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			283267	06/12/19 15:25	NJD	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

JJZ = Joseph Zubrow

RJR = Ron Rosenbaum

Batch Type: Analysis

AVS = Abbey Smith

KAK = Kayla Kalamasz

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Client Sample ID: PZ-1

Lab Sample ID: 180-91283-1

Date Collected: 06/12/19 14:40

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 18:09	1
Chloride	8.8		1.0	0.71	mg/L			06/22/19 18:09	1
Sulfate	1.9		1.0	0.38	mg/L			06/22/19 18:09	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00056	J	0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:31	1
Barium	0.066		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:31	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:31	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:31	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:31	1
Chromium	0.0022		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:31	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:31	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:31	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:31	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:31	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:31	1
Lithium	0.0099		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:31	1
Calcium	13		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:31	1
Boron	0.050	J	0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:31	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		10	10	mg/L			06/19/19 15:11	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.41				SU			06/12/19 14:40	1

Client Sample ID: PZ-2

Lab Sample ID: 180-91283-2

Date Collected: 06/12/19 15:25

Matrix: Water

Date Received: 06/13/19 09:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.037	J	0.20	0.026	mg/L			06/22/19 20:26	1
Chloride	15		1.0	0.71	mg/L			06/22/19 20:26	1
Sulfate	1.1		1.0	0.38	mg/L			06/22/19 20:26	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0013		0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:35	1
Barium	0.083		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:35	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:35	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:35	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:35	1
Chromium	0.0022		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:35	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Client Sample ID: PZ-2

Lab Sample ID: 180-91283-2

Date Collected: 06/12/19 15:25

Matrix: Water

Date Received: 06/13/19 09:00

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:35	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:35	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:35	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:35	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:35	1
Lithium	0.013		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:35	1
Calcium	14		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:35	1
Boron	0.047 J		0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:35	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			06/19/19 15:11	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.31				SU			06/12/19 15:25	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-282583/41
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.026		0.20	0.026	mg/L			06/22/19 17:23	1
Chloride	<0.71		1.0	0.71	mg/L			06/22/19 17:23	1
Sulfate	<0.38		1.0	0.38	mg/L			06/22/19 17:23	1

Lab Sample ID: LCS 180-282583/40
Matrix: Water
Analysis Batch: 282583

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.25	1.30		mg/L		104	90 - 110
Chloride	25.0	26.4		mg/L		106	90 - 110
Sulfate	25.0	26.4		mg/L		106	90 - 110

Lab Sample ID: 180-91283-2 MS
Matrix: Water
Analysis Batch: 282583

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.037	J	1.25	1.42		mg/L		111	80 - 120
Chloride	15		25.0	41.0		mg/L		106	80 - 120
Sulfate	1.1		25.0	27.4		mg/L		105	80 - 120

Lab Sample ID: 180-91283-2 MSD
Matrix: Water
Analysis Batch: 282583

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.037	J	1.25	1.38		mg/L		108	80 - 120	3	20
Chloride	15		25.0	40.8		mg/L		105	80 - 120	0	20
Sulfate	1.1		25.0	27.1		mg/L		104	80 - 120	1	20

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-282349/1-A
Matrix: Water
Analysis Batch: 283135

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 282349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/20/19 09:10	06/26/19 17:08	1
Barium	<0.0015		0.010	0.0015	mg/L		06/20/19 09:10	06/26/19 17:08	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/20/19 09:10	06/26/19 17:08	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/20/19 09:10	06/26/19 17:08	1
Chromium	<0.0015		0.0020	0.0015	mg/L		06/20/19 09:10	06/26/19 17:08	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/20/19 09:10	06/26/19 17:08	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/20/19 09:10	06/26/19 17:08	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/20/19 09:10	06/26/19 17:08	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/20/19 09:10	06/26/19 17:08	1
Lithium	<0.0031		0.0050	0.0031	mg/L		06/20/19 09:10	06/26/19 17:08	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-282349/1-A
Matrix: Water
Analysis Batch: 283135

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 282349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.12		0.50	0.12	mg/L		06/20/19 09:10	06/26/19 17:08	1
Boron	<0.030		0.080	0.030	mg/L		06/20/19 09:10	06/26/19 17:08	1

Lab Sample ID: LCS 180-282349/2-A
Matrix: Water
Analysis Batch: 283135

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	1.04		mg/L		104	80 - 120
Barium	1.00	1.03		mg/L		103	80 - 120
Beryllium	0.500	0.582		mg/L		116	80 - 120
Cadmium	0.500	0.522		mg/L		104	80 - 120
Cobalt	0.500	0.507		mg/L		101	80 - 120
Chromium	0.500	0.528		mg/L		106	80 - 120
Molybdenum	0.500	0.535		mg/L		107	80 - 120
Lead	0.500	0.530		mg/L		106	80 - 120
Antimony	0.250	0.273		mg/L		109	80 - 120
Selenium	1.00	1.00		mg/L		100	80 - 120
Thallium	1.00	1.08		mg/L		108	80 - 120
Lithium	0.500	0.465		mg/L		93	80 - 120
Calcium	25.0	27.1		mg/L		109	80 - 120
Boron	1.25	1.09		mg/L		87	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-282698/1-A
Matrix: Water
Analysis Batch: 282898

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 282698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 10:14	06/25/19 12:08	1

Lab Sample ID: LCS 180-282698/2-A
Matrix: Water
Analysis Batch: 282898

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 282698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00250	0.00262		mg/L		105	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-282278/2
Matrix: Water
Analysis Batch: 282278

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/19/19 15:11	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-282278/1
Matrix: Water
Analysis Batch: 282278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	178		mg/L		89	80 - 120

- 1
- 2
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- 13

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91283-1
SDG: 1

HPLC/IC

Analysis Batch: 282583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total/NA	Water	300.0	
180-91283-2	PZ-2	Total/NA	Water	300.0	
MB 180-282583/41	Method Blank	Total/NA	Water	300.0	
LCS 180-282583/40	Lab Control Sample	Total/NA	Water	300.0	
180-91283-2 MS	PZ-2	Total/NA	Water	300.0	
180-91283-2 MSD	PZ-2	Total/NA	Water	300.0	

Metals

Prep Batch: 282349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total Recoverable	Water	3005A	
180-91283-2	PZ-2	Total Recoverable	Water	3005A	
MB 180-282349/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-282349/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 282698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total/NA	Water	7470A	
180-91283-2	PZ-2	Total/NA	Water	7470A	
MB 180-282698/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-282698/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 282898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total/NA	Water	EPA 7470A	282698
180-91283-2	PZ-2	Total/NA	Water	EPA 7470A	282698
MB 180-282698/1-A	Method Blank	Total/NA	Water	EPA 7470A	282698
LCS 180-282698/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	282698

Analysis Batch: 283135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total Recoverable	Water	EPA 6020	282349
180-91283-2	PZ-2	Total Recoverable	Water	EPA 6020	282349
MB 180-282349/1-A	Method Blank	Total Recoverable	Water	EPA 6020	282349
LCS 180-282349/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	282349

General Chemistry

Analysis Batch: 282278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total/NA	Water	SM 2540C	
180-91283-2	PZ-2	Total/NA	Water	SM 2540C	
MB 180-282278/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-282278/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 283267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91283-1	PZ-1	Total/NA	Water	Field Sampling	
180-91283-2	PZ-2	Total/NA	Water	Field Sampling	

Eurofins TestAmerica, Pittsburgh

Client Information Client Contact: Corey Ladner Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: _____ Email: X2CTLADN@SOUTHERNCO.COM Project Name: CCR - Plant Watson Site: _____		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): _____ COC No: 180-50463-10589.2 Page: Page 2 of 2 Job #: _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10382606 WO #: _____ Project #: 18020186 SSON#: _____		Analysis Requested Field Filtered Sample (Yes or No)	
Sample Identification PZ-1 PZ-2		Total Number of Containers: _____ Special Instructions/Note: _____	
Sample Date: 6-12-19 Sample Time: 1440 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Solid, O=Other): Water	Sample Date: 6-12-19 Sample Time: 1525 Sample Type (C=Comp, G=grab): G Matrix (W=Water, S=Solid, O=Other): water	6020_7470A 2540C_Calcd, 300_ORGFM_28D 9315_Ra226, 9320_Ra228	D N D A G A X X X
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify) _____			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements: _____			
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Method of Shipment: _____ Date/Time: 6-12-19 1743 Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: _____ Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: _____	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-91283-1

SDG Number: 1

Login Number: 91283

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91539-1
Laboratory Sample Delivery Group: 1
Client Project/Site: CCR - Plant Watson
Revision: 1

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
7/31/2019 5:04:51 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Job ID: 180-91539-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-91539-1

Comments

No additional comments.

Receipt

The samples were received on 6/20/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6° C.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The following samples were diluted due to the high concentration of sodium in the sample matrix: PZ-3 (180-91539-1), PZ-4 (180-91539-2) and DUP-01 (180-91539-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kansas	NELAP		E-10350	03-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP	5	042-999-482	12-31-19
Minnesota	NELAP		042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	08-31-19 *
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Utah	NELAP		PA001462019-8	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91539-1	PZ-3	Water	06/19/19 14:00	06/20/19 09:30	
180-91539-3	EB-01	Water	06/19/19 12:25	06/20/19 09:30	
180-91539-4	FB-01	Water	06/19/19 12:15	06/20/19 09:30	
180-91539-5	DUP-01	Water	06/19/19 09:00	06/20/19 09:30	

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
Field Sampling	Field Sampling	EPA	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-91539-1

Date Collected: 06/19/19 14:00

Matrix: Water

Date Received: 06/20/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			282953	06/26/19 11:48	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total/NA	Analysis	300.0		100			282953	06/26/19 12:04	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	282681	06/24/19 07:57	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			283966	07/03/19 13:49	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282753	06/24/19 13:45	KAK	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282947	06/25/19 15:15	KAK	TAL PIT
Instrument ID: HGY										
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282492	06/21/19 08:50	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	Field Sampling		1			283267	06/19/19 14:00	NJD	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: EB-01

Lab Sample ID: 180-91539-3

Date Collected: 06/19/19 12:25

Matrix: Water

Date Received: 06/20/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			282953	06/26/19 08:38	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	282681	06/24/19 07:57	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			284064	07/05/19 09:08	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282747	06/24/19 13:35	KAK	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282947	06/25/19 16:00	KAK	TAL PIT
Instrument ID: HGY										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282492	06/21/19 08:50	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: FB-01

Lab Sample ID: 180-91539-4

Date Collected: 06/19/19 12:15

Matrix: Water

Date Received: 06/20/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			282953	06/26/19 08:54	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	282681	06/24/19 07:57	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			284064	07/05/19 09:11	RSK	TAL PIT
Instrument ID: A										
Total/NA	Prep	7470A			50 mL	50 mL	282747	06/24/19 13:35	KAK	TAL PIT
Total/NA	Analysis	EPA 7470A		1			282947	06/25/19 16:01	KAK	TAL PIT
Instrument ID: HGY										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Client Sample ID: FB-01

Lab Sample ID: 180-91539-4

Date Collected: 06/19/19 12:15

Matrix: Water

Date Received: 06/20/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282492	06/21/19 08:50	AVS	TAL PIT

Client Sample ID: DUP-01

Lab Sample ID: 180-91539-5

Date Collected: 06/19/19 09:00

Matrix: Water

Date Received: 06/20/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0 Instrument ID: CHICS2100B		5			282953	06/26/19 10:44	MJH	TAL PIT
Total/NA	Analysis	300.0 Instrument ID: CHICS2100B		50			282953	06/26/19 11:00	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	282681	06/24/19 07:57	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		10			283966	07/03/19 14:03	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	282747	06/24/19 13:35	KAK	TAL PIT
Total/NA	Analysis	EPA 7470A Instrument ID: HGY		1			282947	06/25/19 16:03	KAK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	20 mL	100 mL	282492	06/21/19 08:50	AVS	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KAK = Kayla Kalamasz

RJR = Ron Rosenbaum

Batch Type: Analysis

AVS = Abbey Smith

KAK = Kayla Kalamasz

MJH = Matthew Hartman

NJD = Nicholas DiNardo

RSK = Robert Kurtz

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Client Sample ID: PZ-3

Lab Sample ID: 180-91539-1

Date Collected: 06/19/19 14:00

Matrix: Water

Date Received: 06/20/19 09:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4000		100	71	mg/L			06/26/19 12:04	100
Fluoride	<0.26		2.0	0.26	mg/L			06/26/19 11:48	10
Sulfate	810		10	3.8	mg/L			06/26/19 11:48	10

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.16		0.010	0.0032	mg/L		06/24/19 07:57	07/03/19 13:49	10
Barium	0.059	J	0.10	0.015	mg/L		06/24/19 07:57	07/03/19 13:49	10
Beryllium	<0.0016		0.010	0.0016	mg/L		06/24/19 07:57	07/03/19 13:49	10
Cadmium	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 13:49	10
Cobalt	0.0040	J	0.0050	0.00075	mg/L		06/24/19 07:57	07/03/19 13:49	10
Chromium	<0.015		0.020	0.015	mg/L		06/24/19 07:57	07/03/19 13:49	10
Molybdenum	0.41		0.050	0.0061	mg/L		06/24/19 07:57	07/03/19 13:49	10
Lead	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 13:49	10
Antimony	<0.0038		0.020	0.0038	mg/L		06/24/19 07:57	07/03/19 13:49	10
Selenium	<0.026		0.050	0.026	mg/L		06/24/19 07:57	07/03/19 13:49	10
Thallium	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 13:49	10
Lithium	0.059		0.050	0.031	mg/L		06/24/19 07:57	07/03/19 13:49	10
Calcium	450		5.0	1.2	mg/L		06/24/19 07:57	07/03/19 13:49	10
Boron	9.5		0.80	0.30	mg/L		06/24/19 07:57	07/03/19 13:49	10

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 13:45	06/25/19 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7100		100	100	mg/L			06/21/19 08:50	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH by SM4500-H B	6.1				SU			06/19/19 14:00	1

Client Sample ID: EB-01

Lab Sample ID: 180-91539-3

Date Collected: 06/19/19 12:25

Matrix: Water

Date Received: 06/20/19 09:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/26/19 08:38	1
Fluoride	<0.026		0.20	0.026	mg/L			06/26/19 08:38	1
Sulfate	<0.38		1.0	0.38	mg/L			06/26/19 08:38	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/24/19 07:57	07/05/19 09:08	1
Barium	0.0017	J	0.010	0.0015	mg/L		06/24/19 07:57	07/05/19 09:08	1
Beryllium	0.00022	J	0.0010	0.00016	mg/L		06/24/19 07:57	07/05/19 09:08	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:08	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/24/19 07:57	07/05/19 09:08	1
Chromium	0.0022		0.0020	0.0015	mg/L		06/24/19 07:57	07/05/19 09:08	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Client Sample ID: EB-01

Lab Sample ID: 180-91539-3

Date Collected: 06/19/19 12:25

Matrix: Water

Date Received: 06/20/19 09:30

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/24/19 07:57	07/05/19 09:08	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:08	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/24/19 07:57	07/05/19 09:08	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/24/19 07:57	07/05/19 09:08	1
Thallium	0.00013	J	0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:08	1
Lithium	0.0064		0.0050	0.0031	mg/L		06/24/19 07:57	07/05/19 09:08	1
Calcium	<0.12		0.50	0.12	mg/L		06/24/19 07:57	07/05/19 09:08	1
Boron	<0.030		0.080	0.030	mg/L		06/24/19 07:57	07/05/19 09:08	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 13:35	06/25/19 16:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/21/19 08:50	1

Client Sample ID: FB-01

Lab Sample ID: 180-91539-4

Date Collected: 06/19/19 12:15

Matrix: Water

Date Received: 06/20/19 09:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/26/19 08:54	1
Fluoride	<0.026		0.20	0.026	mg/L			06/26/19 08:54	1
Sulfate	0.40	J	1.0	0.38	mg/L			06/26/19 08:54	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/24/19 07:57	07/05/19 09:11	1
Barium	0.0023	J	0.010	0.0015	mg/L		06/24/19 07:57	07/05/19 09:11	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/24/19 07:57	07/05/19 09:11	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:11	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/24/19 07:57	07/05/19 09:11	1
Chromium	0.0021		0.0020	0.0015	mg/L		06/24/19 07:57	07/05/19 09:11	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/24/19 07:57	07/05/19 09:11	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:11	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/24/19 07:57	07/05/19 09:11	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/24/19 07:57	07/05/19 09:11	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/05/19 09:11	1
Lithium	0.0049	J	0.0050	0.0031	mg/L		06/24/19 07:57	07/05/19 09:11	1
Calcium	<0.12		0.50	0.12	mg/L		06/24/19 07:57	07/05/19 09:11	1
Boron	<0.030		0.080	0.030	mg/L		06/24/19 07:57	07/05/19 09:11	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 13:35	06/25/19 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/21/19 08:50	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Client Sample ID: DUP-01

Lab Sample ID: 180-91539-5

Date Collected: 06/19/19 09:00

Matrix: Water

Date Received: 06/20/19 09:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2600		50	36	mg/L			06/26/19 11:00	50
Fluoride	<0.13		1.0	0.13	mg/L			06/26/19 10:44	5
Sulfate	410		5.0	1.9	mg/L			06/26/19 10:44	5

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.24		0.010	0.0032	mg/L		06/24/19 07:57	07/03/19 14:03	10
Barium	0.13		0.10	0.015	mg/L		06/24/19 07:57	07/03/19 14:03	10
Beryllium	<0.0016		0.010	0.0016	mg/L		06/24/19 07:57	07/03/19 14:03	10
Cadmium	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 14:03	10
Cobalt	<0.00075		0.0050	0.00075	mg/L		06/24/19 07:57	07/03/19 14:03	10
Chromium	<0.015		0.020	0.015	mg/L		06/24/19 07:57	07/03/19 14:03	10
Molybdenum	0.45		0.050	0.0061	mg/L		06/24/19 07:57	07/03/19 14:03	10
Lead	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 14:03	10
Antimony	<0.0038		0.020	0.0038	mg/L		06/24/19 07:57	07/03/19 14:03	10
Selenium	<0.026		0.050	0.026	mg/L		06/24/19 07:57	07/03/19 14:03	10
Thallium	<0.0013		0.010	0.0013	mg/L		06/24/19 07:57	07/03/19 14:03	10
Lithium	<0.031		0.050	0.031	mg/L		06/24/19 07:57	07/03/19 14:03	10
Calcium	260		5.0	1.2	mg/L		06/24/19 07:57	07/03/19 14:03	10
Boron	11		0.80	0.30	mg/L		06/24/19 07:57	07/03/19 14:03	10

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 13:35	06/25/19 16:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4400		50	50	mg/L			06/21/19 08:50	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-282953/6
Matrix: Water
Analysis Batch: 282953

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			06/26/19 04:01	1
Fluoride	<0.026		0.20	0.026	mg/L			06/26/19 04:01	1
Sulfate	<0.38		1.0	0.38	mg/L			06/26/19 04:01	1

Lab Sample ID: LCS 180-282953/5
Matrix: Water
Analysis Batch: 282953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.5		mg/L		102	90 - 110
Fluoride	1.25	1.21		mg/L		97	90 - 110
Sulfate	25.0	25.5		mg/L		102	90 - 110

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-282681/1-A
Matrix: Water
Analysis Batch: 283966

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 282681

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		06/24/19 07:57	07/03/19 13:42	1
Barium	<0.0015		0.010	0.0015	mg/L		06/24/19 07:57	07/03/19 13:42	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		06/24/19 07:57	07/03/19 13:42	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/03/19 13:42	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		06/24/19 07:57	07/03/19 13:42	1
Chromium	<0.0015		0.0020	0.0015	mg/L		06/24/19 07:57	07/03/19 13:42	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		06/24/19 07:57	07/03/19 13:42	1
Lead	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/03/19 13:42	1
Antimony	<0.00038		0.0020	0.00038	mg/L		06/24/19 07:57	07/03/19 13:42	1
Selenium	<0.0026		0.0050	0.0026	mg/L		06/24/19 07:57	07/03/19 13:42	1
Thallium	<0.00013		0.0010	0.00013	mg/L		06/24/19 07:57	07/03/19 13:42	1
Lithium	<0.0031		0.0050	0.0031	mg/L		06/24/19 07:57	07/03/19 13:42	1
Calcium	<0.12		0.50	0.12	mg/L		06/24/19 07:57	07/03/19 13:42	1
Boron	<0.030		0.080	0.030	mg/L		06/24/19 07:57	07/03/19 13:42	1

Lab Sample ID: LCS 180-282681/2-A
Matrix: Water
Analysis Batch: 283966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.05		mg/L		105	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	0.500	0.489		mg/L		98	80 - 120
Cadmium	0.500	0.514		mg/L		103	80 - 120
Cobalt	0.500	0.513		mg/L		103	80 - 120
Chromium	0.500	0.507		mg/L		101	80 - 120
Molybdenum	0.500	0.531		mg/L		106	80 - 120
Lead	0.500	0.515		mg/L		103	80 - 120
Antimony	0.250	0.269		mg/L		108	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-282681/2-A
Matrix: Water
Analysis Batch: 283966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 282681

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	0.974		mg/L		97	80 - 120
Thallium	1.00	1.05		mg/L		105	80 - 120
Lithium	0.500	0.505		mg/L		101	80 - 120
Calcium	25.0	27.3		mg/L		109	80 - 120
Boron	1.25	1.25		mg/L		100	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-282747/1-A
Matrix: Water
Analysis Batch: 282947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 282747

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000108	J	0.00020	0.00010	mg/L		06/24/19 13:35	06/25/19 15:28	1

Lab Sample ID: LCS 180-282747/2-A
Matrix: Water
Analysis Batch: 282947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 282747

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00261		mg/L		104	80 - 120

Lab Sample ID: MB 180-282753/1-A
Matrix: Water
Analysis Batch: 282947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 282753

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		06/24/19 13:45	06/25/19 14:52	1

Lab Sample ID: LCS 180-282753/2-A
Matrix: Water
Analysis Batch: 282947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 282753

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00252		mg/L		101	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-282492/2
Matrix: Water
Analysis Batch: 282492

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/21/19 08:50	1

Lab Sample ID: LCS 180-282492/1
Matrix: Water
Analysis Batch: 282492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	230		mg/L		114	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

HPLC/IC

Analysis Batch: 282953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total/NA	Water	300.0	
180-91539-1	PZ-3	Total/NA	Water	300.0	
180-91539-3	EB-01	Total/NA	Water	300.0	
180-91539-4	FB-01	Total/NA	Water	300.0	
180-91539-5	DUP-01	Total/NA	Water	300.0	
180-91539-5	DUP-01	Total/NA	Water	300.0	

Metals

Prep Batch: 282681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total Recoverable	Water	3005A	
180-91539-3	EB-01	Total Recoverable	Water	3005A	
180-91539-4	FB-01	Total Recoverable	Water	3005A	
180-91539-5	DUP-01	Total Recoverable	Water	3005A	

Prep Batch: 282747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-3	EB-01	Total/NA	Water	7470A	
180-91539-4	FB-01	Total/NA	Water	7470A	
180-91539-5	DUP-01	Total/NA	Water	7470A	

Prep Batch: 282753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total/NA	Water	7470A	

Analysis Batch: 282947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total/NA	Water	EPA 7470A	282753
180-91539-3	EB-01	Total/NA	Water	EPA 7470A	282747
180-91539-4	FB-01	Total/NA	Water	EPA 7470A	282747
180-91539-5	DUP-01	Total/NA	Water	EPA 7470A	282747

Analysis Batch: 283966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total Recoverable	Water	EPA 6020	282681
180-91539-5	DUP-01	Total Recoverable	Water	EPA 6020	282681

Analysis Batch: 284064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-3	EB-01	Total Recoverable	Water	EPA 6020	282681
180-91539-4	FB-01	Total Recoverable	Water	EPA 6020	282681

General Chemistry

Analysis Batch: 282492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total/NA	Water	SM 2540C	
180-91539-3	EB-01	Total/NA	Water	SM 2540C	
180-91539-4	FB-01	Total/NA	Water	SM 2540C	
180-91539-5	DUP-01	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91539-1
SDG: 1

Field Service / Mobile Lab

Analysis Batch: 283267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91539-1	PZ-3	Total/NA	Water	Field Sampling	

- 1
- 2
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- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Information Client Contact: Corey Ledner Company: Southern Company Address: PO BOX 2641 GSC8 City: Birmingham State, Zip: AL, 35291 Phone: X2CTLADN@SOUTHERNCO.COM Email: 18020186 Project Name: CCR - Plant Watson Site:		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): COC No: 180-52349-10589.2 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: SCS10382606 WO #: Project #: SSOW#:		Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AshNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification PZ-3 PZ-4 GB-01 FB-01 Dup-01		Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air) Water	
Sample Date 6-19-19 1155 1225 1215 0900		Sample Time 1400 G ↓ ↓ ↓ ↓	
Sample Type (C=comp, G=grab) G ↓ ↓ ↓ ↓		Field Filtered Sample (Yes or No) D N D X X X ↓ ↓ ↓ ↓	
Perform MS/MSD (Yes or No) D N D X X X ↓ ↓ ↓ ↓		Total Number of Containers 9315_Ra226, 9320_Ra228 2540C_Calcd, 300_ORGFM_28D 6020_7470A ↓ ↓ ↓ ↓	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:			
Empty Kit Relinquished by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Relinquished by:		Method of Shipment: Date/Time: 6-19-19 1415 Date/Time: 6-20-19 930 Date/Time:	
Relinquished by: <i>[Signature]</i> Relinquished by:		Received by: <i>[Signature]</i> Received by: <i>[Signature]</i> Received by:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-91539-1

SDG Number: 1

Login Number: 91539

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91957-1
Client Project/Site: CCR - Plant Watson

For:
Southern Company
PO BOX 2641 GSC8
Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:
7/19/2019 4:56:13 PM

Veronica Bortot, Senior Project Manager
(412)963-2435
veronica.bortot@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Job ID: 180-91957-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-91957-1

Comments

No additional comments.

Receipt

The samples were received on 6/27/2019 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 180-284064 recovered above the upper control limit for boron. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-3 (180-91957-1) and DUP-01 (180-91957-2). Elevated reporting limits (RLs) are provided.

.No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State		19-033-0	06-27-20
Arkansas DEQ	State Program	6	88-0690	06-27-20
California	State		2891	04-30-20
California	State Program	9	2891	04-30-20
Connecticut	State		PH-0688	09-30-20
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-20
Florida	NELAP		E871008	06-30-20
Illinois	NELAP	5	200005	06-30-20
Illinois	NELAP		004375	06-30-20
Kansas	NELAP	7	E-10350	01-31-20
Kentucky (UST)	State Program	4	162013	04-30-20
Kentucky (WW)	State Program	4	KY98043	12-31-19
Louisiana	NELAP	6	04041	06-30-20
Minnesota	NELAP Secondary AB	5	042-999-482	12-31-19
Nevada	State		PA00164	07-31-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-20
New Jersey	NELAP	2	PA005	06-30-20
New Jersey	NELAP		PA005	06-30-20
New York	NELAP	2	11182	03-31-20
New York	NELAP		11182	04-01-20
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	02-06-20
Oregon	NELAP		PA-2151	02-06-20
Pennsylvania	NELAP	3	02-00416	04-30-20
Pennsylvania	NELAP		02-00416	04-30-20
Rhode Island	State		LAO00362	12-30-19
Rhode Island	State Program	1	LAO00362	12-30-19
South Carolina	State Program	4	89014	04-30-20
Texas	NELAP	6	T104704528-15-2	03-31-20
Texas	NELAP		T104704528	03-31-20
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
US Fish & Wildlife	US Federal Programs		058448	07-31-20
USDA	Federal		P-Soil-01	06-26-22
Utah	NELAP	8	PA001462015-4	05-31-20
Virginia	NELAP	3	460189	09-14-19
Virginia	NELAP		10043	09-14-19
West Virginia DEP	State		142	01-31-20
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State		998027800	08-31-19
Wisconsin	State Program	5	998027800	08-31-19

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91957-1	PZ-3	Water	06/25/19 09:25	06/27/19 15:00	
180-91957-2	DUP-01	Water	06/25/19 08:25	06/27/19 15:00	

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- 12
- 13

Method Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Client Sample ID: PZ-3

Date Collected: 06/25/19 09:25

Date Received: 06/27/19 15:00

Lab Sample ID: 180-91957-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			284094	07/08/19 06:58	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		100			284094	07/08/19 07:14	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	283521	07/01/19 07:54	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			284064	07/05/19 16:17	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	284346	07/10/19 08:24	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			284460	07/10/19 16:50	RJR	TAL PIT
	Instrument ID: HGY									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	283316	06/28/19 08:36	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-01

Date Collected: 06/25/19 08:25

Date Received: 06/27/19 15:00

Lab Sample ID: 180-91957-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			284094	07/08/19 09:09	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	300.0		100			284094	07/08/19 09:26	MJH	TAL PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	283521	07/01/19 07:54	RJR	TAL PIT
Total Recoverable	Analysis	EPA 6020		10			284064	07/05/19 16:21	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Prep	7470A			50 mL	50 mL	284346	07/10/19 08:24	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			284460	07/10/19 16:51	RJR	TAL PIT
	Instrument ID: HGY									
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	283316	06/28/19 08:36	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

RJR = Ron Rosenbaum

Batch Type: Analysis

MJH = Matthew Hartman

RJR = Ron Rosenbaum

RSK = Robert Kurtz

TAM = Tessa Mastalski

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Client Sample ID: PZ-3

Lab Sample ID: 180-91957-1

Date Collected: 06/25/19 09:25

Matrix: Water

Date Received: 06/27/19 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4000		100	71	mg/L			07/08/19 07:14	100
Fluoride	0.32	J	2.0	0.26	mg/L			07/08/19 06:58	10
Sulfate	800		10	3.8	mg/L			07/08/19 06:58	10

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.010	0.0032	mg/L		07/01/19 07:54	07/05/19 16:17	10
Barium	0.057	J B	0.10	0.015	mg/L		07/01/19 07:54	07/05/19 16:17	10
Beryllium	<0.0016		0.010	0.0016	mg/L		07/01/19 07:54	07/05/19 16:17	10
Cadmium	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:17	10
Cobalt	0.0014	J	0.0050	0.00075	mg/L		07/01/19 07:54	07/05/19 16:17	10
Chromium	<0.015		0.020	0.015	mg/L		07/01/19 07:54	07/05/19 16:17	10
Molybdenum	0.37		0.050	0.0061	mg/L		07/01/19 07:54	07/05/19 16:17	10
Lead	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:17	10
Antimony	<0.0038		0.020	0.0038	mg/L		07/01/19 07:54	07/05/19 16:17	10
Selenium	<0.026		0.050	0.026	mg/L		07/01/19 07:54	07/05/19 16:17	10
Thallium	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:17	10
Lithium	0.052		0.050	0.031	mg/L		07/01/19 07:54	07/05/19 16:17	10
Calcium	450		5.0	1.2	mg/L		07/01/19 07:54	07/05/19 16:17	10
Boron	11	B ^	0.80	0.30	mg/L		07/01/19 07:54	07/05/19 16:17	10

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		07/10/19 08:24	07/10/19 16:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8500		100	100	mg/L			06/28/19 08:36	1

Client Sample ID: DUP-01

Lab Sample ID: 180-91957-2

Date Collected: 06/25/19 08:25

Matrix: Water

Date Received: 06/27/19 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3900		100	71	mg/L			07/08/19 09:26	100
Fluoride	0.30	J	2.0	0.26	mg/L			07/08/19 09:09	10
Sulfate	790		10	3.8	mg/L			07/08/19 09:09	10

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.010	0.0032	mg/L		07/01/19 07:54	07/05/19 16:21	10
Barium	0.059	J B	0.10	0.015	mg/L		07/01/19 07:54	07/05/19 16:21	10
Beryllium	<0.0016		0.010	0.0016	mg/L		07/01/19 07:54	07/05/19 16:21	10
Cadmium	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:21	10
Cobalt	0.0014	J	0.0050	0.00075	mg/L		07/01/19 07:54	07/05/19 16:21	10
Chromium	<0.015		0.020	0.015	mg/L		07/01/19 07:54	07/05/19 16:21	10
Molybdenum	0.37		0.050	0.0061	mg/L		07/01/19 07:54	07/05/19 16:21	10
Lead	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:21	10
Antimony	<0.0038		0.020	0.0038	mg/L		07/01/19 07:54	07/05/19 16:21	10
Selenium	<0.026		0.050	0.026	mg/L		07/01/19 07:54	07/05/19 16:21	10

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Client Sample ID: DUP-01

Lab Sample ID: 180-91957-2

Date Collected: 06/25/19 08:25

Matrix: Water

Date Received: 06/27/19 15:00

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.0013		0.010	0.0013	mg/L		07/01/19 07:54	07/05/19 16:21	10
Lithium	0.056		0.050	0.031	mg/L		07/01/19 07:54	07/05/19 16:21	10
Calcium	450		5.0	1.2	mg/L		07/01/19 07:54	07/05/19 16:21	10
Boron	11	B ^	0.80	0.30	mg/L		07/01/19 07:54	07/05/19 16:21	10

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		07/10/19 08:24	07/10/19 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	8500		100	100	mg/L			06/28/19 08:36	1

QC Sample Results

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-284094/6
Matrix: Water
Analysis Batch: 284094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			07/08/19 04:27	1
Fluoride	<0.026		0.20	0.026	mg/L			07/08/19 04:27	1
Sulfate	<0.38		1.0	0.38	mg/L			07/08/19 04:27	1

Lab Sample ID: LCS 180-284094/5
Matrix: Water
Analysis Batch: 284094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.8		mg/L		99	90 - 110
Fluoride	1.25	1.23		mg/L		99	90 - 110
Sulfate	25.0	24.7		mg/L		99	90 - 110

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-283521/1-A
Matrix: Water
Analysis Batch: 284064

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 283521

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00032		0.0010	0.00032	mg/L		07/01/19 07:54	07/05/19 14:52	1
Barium	0.00235	J	0.010	0.0015	mg/L		07/01/19 07:54	07/05/19 14:52	1
Beryllium	<0.00016		0.0010	0.00016	mg/L		07/01/19 07:54	07/05/19 14:52	1
Cadmium	<0.00013		0.0010	0.00013	mg/L		07/01/19 07:54	07/05/19 14:52	1
Cobalt	<0.000075		0.00050	0.000075	mg/L		07/01/19 07:54	07/05/19 14:52	1
Chromium	<0.0015		0.0020	0.0015	mg/L		07/01/19 07:54	07/05/19 14:52	1
Molybdenum	<0.00061		0.0050	0.00061	mg/L		07/01/19 07:54	07/05/19 14:52	1
Lead	<0.00013		0.0010	0.00013	mg/L		07/01/19 07:54	07/05/19 14:52	1
Antimony	<0.00038		0.0020	0.00038	mg/L		07/01/19 07:54	07/05/19 14:52	1
Selenium	<0.0026		0.0050	0.0026	mg/L		07/01/19 07:54	07/05/19 14:52	1
Thallium	<0.00013		0.0010	0.00013	mg/L		07/01/19 07:54	07/05/19 14:52	1
Lithium	<0.0031		0.0050	0.0031	mg/L		07/01/19 07:54	07/05/19 14:52	1

Lab Sample ID: LCS 180-283521/2-A
Matrix: Water
Analysis Batch: 284092

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 283521

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.08		mg/L		108	80 - 120
Barium	1.00	1.03		mg/L		103	80 - 120
Beryllium	0.500	0.505		mg/L		101	80 - 120
Cadmium	0.500	0.524		mg/L		105	80 - 120
Cobalt	0.500	0.545		mg/L		109	80 - 120
Chromium	0.500	0.539		mg/L		108	80 - 120
Molybdenum	0.500	0.509		mg/L		102	80 - 120
Lead	0.500	0.532		mg/L		106	80 - 120
Antimony	0.250	0.273		mg/L		109	80 - 120
Selenium	1.00	1.07		mg/L		107	80 - 120
Thallium	1.00	1.08		mg/L		108	80 - 120

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-283521/2-A
 Matrix: Water
 Analysis Batch: 284092

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 283521

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.492		mg/L		98	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-284346/1-A
 Matrix: Water
 Analysis Batch: 284460

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 284346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00010		0.00020	0.00010	mg/L		07/10/19 08:24	07/10/19 16:18	1

Lab Sample ID: LCS 180-284346/2-A
 Matrix: Water
 Analysis Batch: 284460

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 284346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00277		mg/L		111	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-283316/2
 Matrix: Water
 Analysis Batch: 283316

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			06/28/19 08:36	1

Lab Sample ID: LCS 180-283316/1
 Matrix: Water
 Analysis Batch: 283316

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	208		mg/L		103	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant Watson

Job ID: 180-91957-1

HPLC/IC

Analysis Batch: 284094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total/NA	Water	300.0	
180-91957-1	PZ-3	Total/NA	Water	300.0	
180-91957-2	DUP-01	Total/NA	Water	300.0	
180-91957-2	DUP-01	Total/NA	Water	300.0	
MB 180-284094/6	Method Blank	Total/NA	Water	300.0	
LCS 180-284094/5	Lab Control Sample	Total/NA	Water	300.0	

Metals

Prep Batch: 283521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total Recoverable	Water	3005A	
180-91957-2	DUP-01	Total Recoverable	Water	3005A	
MB 180-283521/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-283521/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 284064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total Recoverable	Water	EPA 6020	283521
180-91957-2	DUP-01	Total Recoverable	Water	EPA 6020	283521
MB 180-283521/1-A	Method Blank	Total Recoverable	Water	EPA 6020	283521

Analysis Batch: 284092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-283521/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	283521

Prep Batch: 284346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total/NA	Water	7470A	
180-91957-2	DUP-01	Total/NA	Water	7470A	
MB 180-284346/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-284346/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 284460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total/NA	Water	EPA 7470A	284346
180-91957-2	DUP-01	Total/NA	Water	EPA 7470A	284346
MB 180-284346/1-A	Method Blank	Total/NA	Water	EPA 7470A	284346
LCS 180-284346/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	284346

General Chemistry

Analysis Batch: 283316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91957-1	PZ-3	Total/NA	Water	SM 2540C	
180-91957-2	DUP-01	Total/NA	Water	SM 2540C	
MB 180-283316/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-283316/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-91957-1

Login Number: 91957

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Stage 2A Data Verification Report
Mississippi Power
Watson Fossil Plant
Site Ash Pond
Coal Combustion Residuals Project
Groundwater Samples**

This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the 80 groundwater samples collected as part of the eight rounds of 2018-2019 baseline monitoring, at the Mississippi Power Watson Fossil Plant facility. These samples were collectively analyzed by TestAmerica Laboratories, Inc. (TestAmerica), of Pensacola, Florida, for total and dissolved metals by SW-846 Method 6020A; for total and dissolved mercury by SW-846 Method 7470A; for total dissolved solids (TDS) by Standard Methods (SM) 2540C; and for anions (specifically, chloride, fluoride, and sulfate) by US EPA Method 300.0. In addition, these samples were collectively analyzed by TestAmerica of St. Louis, Missouri, for total radium-226 by SW-846 Method 9315, for total radium-228 by SW-846 Method 9320, and for combined radium-226+228 by calculation.

This review was performed with guidance from the US EPA Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (November 2001); the US EPA Region IV Data Validation Standard Operating Procedures (SOPs; US EPA Region IV, September 2011); and the applied analytical methods. These validation guidance documents, with the exception of the analytical methods, specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the SW-846, US EPA, and SM methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the SW-846, US EPA, and SM methods utilized by the laboratory.

Summary

The analytical results and associated laboratory quality control (QC) samples were reviewed to determine the integrity of the reported analytical results and to verify that the data met the established data quality objectives.

The following sampling events were evaluated as part of this QA review: Event 1, collected on 4/24/2018 and 4/25/2018; Event 2, collected on 6/13/2018 and 6/14/2018; Event 3, collected on 7/23/2018 and 7/24/2018; Event 4, collected 9/1/2018 through 9/6/2018; Event 5, collected on

10/1/2018 and 10/2/2018; Event 6, collected on 11/1/2018 and 11/2/2018; Event 7, collected on 12/6/2018 and 12/7/2018; Event 8, collected on 2/13/2019.

The following samples were evaluated as part of this QA review: APMW-1, APMW-2, APMW-3, APMW-4, APMW-5, APMW-6, APMW-7, APMW-8, APMW-9, and APMW-10.

The following TestAmerica inorganic Sample Delivery Groups (SDGs) were evaluated as part of this QA review: 400-152827-1, 400-155153-1, 400-156862-1, 400-158670-1, 400-160036-1, 400-161568-1, 400-163233-1, and 400-166095-1.

The following TestAmerica radiological SDGs were evaluated as part of this QA review: 400-152827-2, 400-155153-2, 400-156862-2, 400-158670-2, 400-160036-2, 400-161568-2, 400-163233-2, and 400-166095-2.



Inorganic and Radiological Data Review

Data validation was performed for these samples based on the sample results and summary QC data provided by the laboratory. The findings offered in this report for the inorganic and radiological analyses are based upon a review of the following QC measures:

- Sample condition upon laboratory receipt
- Chain-of-Custody (COC) Records
- Blank analysis results
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision
- Laboratory duplicate precision
- Total vs. dissolved results
- Sample holding times
- Case Narratives
- Chemical yield
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision
- Field duplicate precision

The above QC measures were evaluated against the analytical method requirements and QC acceptance criteria. The data were validated based on guidance from the US EPA Region IV Data Validation SOPs and the referenced procedures, and were qualified as appropriate as described in the sections below.

Comments and Exceptions

1. The data validator applied qualification to combined radium-226+228 based upon the QC samples associated with the analyses of the individual isotopes, radium-226 and radium-228. The electronic data deliverable (EDD) and the database only include the laboratory results for the combined radium-226+228; therefore, qualification of the individual isotopes is not addressed in this QA review.
2. SW-846 Method 9315 includes all alpha-emitting isotopes of radium. In order to analyze for only radium-226, a 21-day ingrowth period must be used. The radium-226 reported by the laboratory underwent a 21-day ingrowth; therefore, the results reported as radium-226 should not contain additional alpha-emitting radium isotopes.
3. Combined radium-226+228 was reported as the summation of the calculated activities for radium-226 and radium-228. As consistent with routine radiological reporting conventions, negative activities were reported for the radium-226 and radium-228 analyses. These negative activities were used in the calculation of combined radium-226+228 activity; therefore, it is possible for the combined radium-226+228 to be less than one of the individual isotopes.
4. The combined radium-226+228 sample-specific minimum detectable concentration (MDC) was reported as the higher of the MDCs for radium-226 and radium-228. Consequently, there may be instances where a detection was observed in one of the individual isotopes, but the combined radium-226+228 result was reported as “not-detected” due to the laboratory’s reporting convention for combined radium-226+228.

5. The combined radium-226+228 result uncertainty was reported using the routine statistical uncertainty reporting conventions as the root sum square (RSS; the square root of the sum of the squared individual uncertainties).
6. In SDG 400-152827-1, the laboratory received a field filtered bottle for sample APMW-1 that was not listed on the COC Record. This sample was analyzed and reported for dissolved metals and mercury. Data qualification based on this issue was not warranted.
7. In all events, the laboratory did not provide the subcontracted COC Record for transfer of the samples from TestAmerica Pensacola to TestAmerica St. Louis. As these items were not needed to complete the data validation, the laboratory had not been requested to provide this information. Qualification of data due to this issue was not warranted.
8. The following field duplicate pairs (see table) were submitted and analyzed for inorganic parameters with this data set. The duplicate pairs were reviewed to assess validity and were found to be acceptable unless otherwise indicated in the Overall Assessment of Data Section below.

Acceptable precision (the relative percent difference [RPD] between results was $\leq 20\%$ when both results were $\geq 5\times$ the reporting limit [RL], the difference between results was \leq the RL when at least one result was $< 5\times$ the RL, or the replicate error ratio [RER] was < 3) were demonstrated by the reported results in the field duplicate pair evaluation with the exception of the parameters indicated in the Overall Assessment of Data Section below.”

<u>Laboratory SDG(s)</u>	<u>Sample</u>	<u>Field Duplicate</u>
400-152827-1 400-152827-2	APMW-4	DUP-01
400-152827-1 400-152827-2	APMW-8	DUP-02
400-155153-1 400-155153-2	APMW-8	DUP-01
400-156862-1 400-156862-2	APMW-8	DUP-01
400-156862-1 400-156862-2	APMW-5	DUP-02
400-158670-1 400-158670-1	APMW-10	DUP-01
400-158670-1 400-158670-1	APMW-9	DUP-02
400-160036-1 400-160036-2	APMW-4	DUP-01
400-160036-1 400-160036-2	APMW-10	DUP-02

<u>Laboratory SDG(s)</u>	<u>Sample</u>	<u>Field Duplicate</u>
400-161568-1 400-161568-2	APMW-9	DUP-01
400-161568-1 400-161568-2	APMW-6	DUP-02
400-163233-1 400-163233-2	APMW-9	DUP-01
400-163233-1 400-163233-2	APMW-2	DUP-02
400-166095-1 400-166095-2	APMW-10	DUP-01

Overall Assessment of Data

Based on a review of the data, qualification of data was warranted as noted below.

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-152827-1	1	all samples	lithium (total)	J	M+ – High MS/MSD recoveries
400-152827-1	1	APMW-1	lithium (dissolved)	J	M+ – High MS/MSD recoveries
400-152827-1	1	all samples	mercury (total)	UJ	M- – Low MS/MSD recoveries
400-152827-1	1	APMW-1	mercury (dissolved)	UJ	M- – Low MS/MSD recoveries
400-155153-1	2	APMW-2	sulfate	U*	BF – Field blank contamination
400-155153-1	2	all samples	mercury (total)	UJ	M- – Low MS/MSD recoveries
400-155153-2	2	APMW-2	combined radium-226+228	J	Y+ – High chemical yield
400-155153-1	2	APMW-2	chloride	J	M- – Low MS/MSD recoveries

<u>Laboratory SDG(s)</u>	<u>Event</u>	<u>Sample(s)</u>	<u>Analyte(s)</u>	<u>Qualifier(s)</u>	<u>Reason(s) for Qualification</u>
400-155153-1	2	APMW-8	total dissolved solids	J	FD – Field duplicate impression
400-156862-1	3	all samples	selenium (total)	U*	BF – Field blank contamination
400-156862-1	3	APMW-2	sulfate	U*	BF – Field blank contamination
400-158670-1	4	APMW-5, APMW-6, APMW-7, APMW-8, APMW-9, and APMW-10	mercury (total)	U*	BF – Field blank contamination
400-160036-1	5	APMW-1, APMW-7, and APMW-9	lithium (total)	U*	BL – Method blank contamination
400-160036-1	5	all samples	mercury (total)	UJ	M- – Low MS/MSD recoveries
400-161568-1	6	APMW-8 and APMW-10	lead (total)	U*	BF – Field blank contamination
400-161568-1	6	APMW-4 and APMW-7	molybdenum (total)	U*	BF – Field blank contamination
400-161568-1	6	APMW-6	arsenic (total) and lead (total)	J/UJ	FD – Field duplicate impression
400-161568-2	6	all samples	combined radium-226+228	J	L- – Low LCS/LCSD recoveries
400-161568-1	6	all samples	selenium (total)	J/UJ	M- – Low MS/MSD recoveries
400-163233-1	7	APMW-1, APMW-7, and APMW-9	fluoride	U*	BF – field blank contamination
400-163233-1	7	APMW-2	fluoride	J	FD – Field duplicate impression
400-163233-1	7	all samples	mercury (total)	UJ	M- – Low MS/MSD recoveries

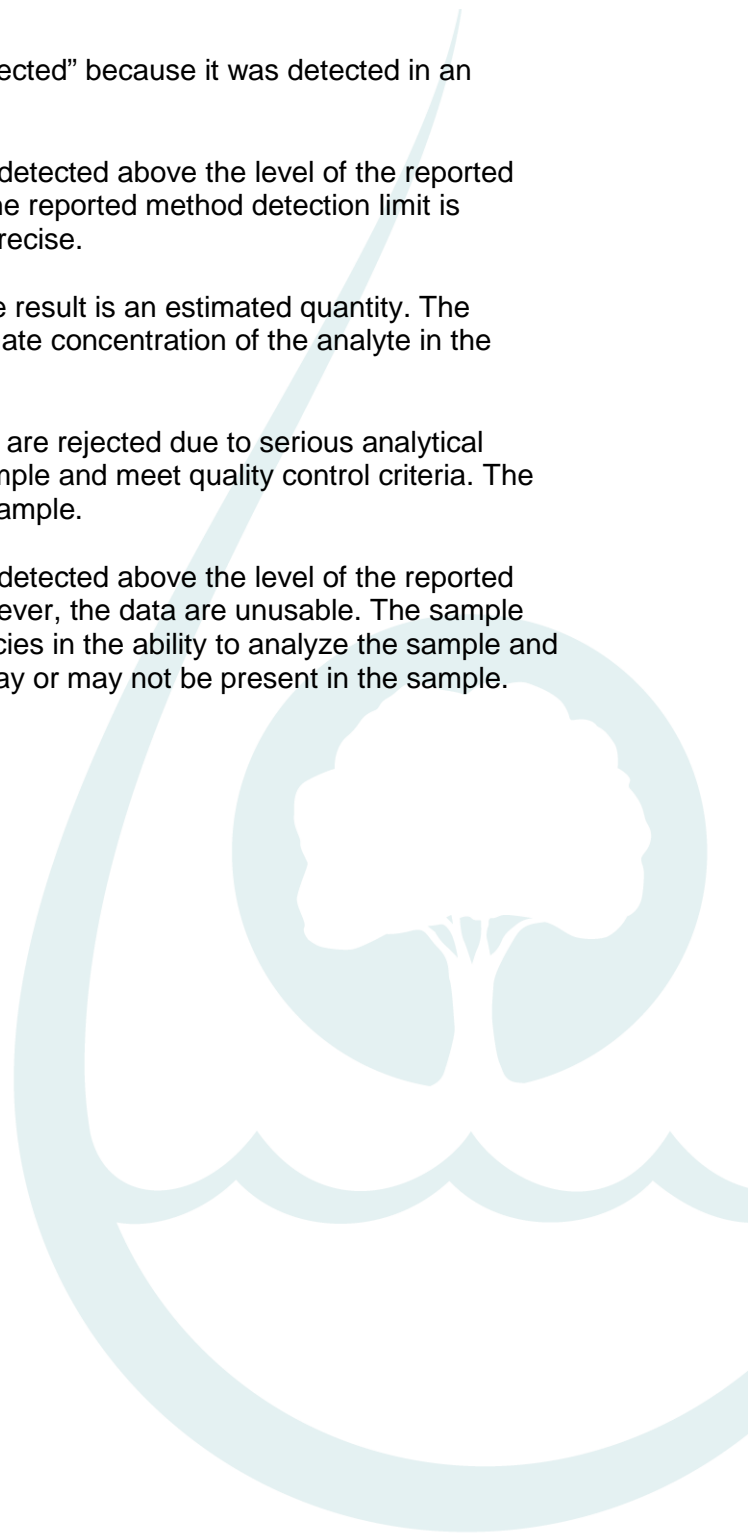
- All inorganic positive results reported between the method detection limit (MDL) and RL have been flagged "J."
- All radiological results reported below the MDC have been flagged "U."

Report prepared by: Abigail Roselli, Quality Assurance Chemist
Report reviewed by: Ammie L. Martin, Senior Quality Assurance Chemist
Report approved by: David I. Thal, CEAC, CQA, Principal Chemist
Date: 6/12/2019



INORGANIC AND RADIOLOGICAL DATA QUALIFIERS

- U - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit.
- U* - This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.
- UJ - The analyte was analyzed for, but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
- J - The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- R - The data are unusable. The sample results are rejected due to serious analytical deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.
- UR - The analyte was analyzed for, but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.



Reason Codes and Explanations

Reason Code	Explanation
BE	Equipment blank contamination. The result should be considered "not-detected."
BF	Field blank contamination. The result should be considered "not-detected."
BL	Laboratory blank contamination. The result should be considered "not-detected."
BN	Negative laboratory blank contamination.
C	Initial and/or continuing calibration issue, indeterminate bias.
C+	Initial and/or continuing calibration issue. The result may be biased high.
C-	Initial and/or continuing calibration issue. The result may be biased low.
FD	Field duplicate imprecision.
FG	Total versus dissolved imprecision.
H	Holding time exceeded.
I	Internal standard recovery outside of acceptance limits.
L	LCS and LCSD recoveries outside of acceptance limits, indeterminate bias.
L+	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased high.
L-	LCS and/or LCSD recoveries outside of acceptance limits. The result may be biased low.
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits, indeterminate bias.
M+	MS and/or MSD recoveries outside of acceptance limits. The result may be biased high.
M-	MS and/or MSD recoveries outside of acceptance limits. The result may be biased low.
MP	MS/MSD imprecision.
P	Post-digestion spike recoveries outside of acceptance limits, indeterminate bias.
P+	Post-digestion spike recovery outside of acceptance limits. The result may be biased high.
P-	Post-digestion spike recovery outside of acceptance limits. The result may be biased low.
Q	Chemical preservation issue.
R	RL standards outside of acceptance limits, indeterminate bias.
R+	RL standard(s) outside of acceptance limits. The result may be biased high.
R-	RL standard(s) outside of acceptance limits. The result may be biased low.
T	Temperature preservation issue.
SD	Serial dilution imprecision.
Y	Chemical yields outside of acceptance limits, indeterminate bias.
Y+	Chemical yield(s) outside of acceptance limits. The result may be biased high.
Y-	Chemical yield(s) outside of acceptance limits. The result may be biased low.
ZZ	Other

APPENDIX B

STATISTICAL DATA EVALUATION

Interwell Prediction Limit Summary - Significant Results

Plant Watson Client: Southern Company Data: Plant Watson AP CCR Printed 7/29/2019, 4:28 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	APMW-10	0.1472	n/a	4/4/2019	1.8	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-1R	0.1472	n/a	4/3/2019	5.3	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-2	0.1472	n/a	4/5/2019	3.6	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-3	0.1472	n/a	4/5/2019	4.5	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-4	0.1472	n/a	4/5/2019	1.6	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-5	0.1472	n/a	4/4/2019	5.8	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-7	0.1472	n/a	4/4/2019	0.98	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-8	0.1472	n/a	4/4/2019	20	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-9	0.1472	n/a	4/4/2019	6.1	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-6R	0.1472	n/a	4/5/2019	8.9	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-10	20.55	n/a	4/4/2019	80	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-1R	20.55	n/a	4/3/2019	140	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-2	20.55	n/a	4/5/2019	310	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-3	20.55	n/a	4/5/2019	290	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-4	20.55	n/a	4/5/2019	170	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-5	20.55	n/a	4/4/2019	270	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-7	20.55	n/a	4/4/2019	98	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-8	20.55	n/a	4/4/2019	440	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-9	20.55	n/a	4/4/2019	270	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-6R	20.55	n/a	4/5/2019	440	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-10	23.44	n/a	4/4/2019	1200	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-1R	23.44	n/a	4/3/2019	1900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-2	23.44	n/a	4/5/2019	2600	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-3	23.44	n/a	4/5/2019	9900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-4	23.44	n/a	4/5/2019	3900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-5	23.44	n/a	4/4/2019	8600	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-7	23.44	n/a	4/4/2019	3700	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-8	23.44	n/a	4/4/2019	3500	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-9	23.44	n/a	4/4/2019	3100	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-6R	23.44	n/a	4/5/2019	4000	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-10	5.368	n/a	4/4/2019	240	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-2	5.368	n/a	4/5/2019	7	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-3	5.368	n/a	4/5/2019	1200	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-4	5.368	n/a	4/5/2019	330	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-5	5.368	n/a	4/4/2019	1100	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-7	5.368	n/a	4/4/2019	61	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-8	5.368	n/a	4/4/2019	640	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-9	5.368	n/a	4/4/2019	330	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-6R	5.368	n/a	4/5/2019	800	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-10	233.2	n/a	4/4/2019	2500	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-1R	233.2	n/a	4/3/2019	3600	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-2	233.2	n/a	4/5/2019	5000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-3	233.2	n/a	4/5/2019	18000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-4	233.2	n/a	4/5/2019	7000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-5	233.2	n/a	4/4/2019	18000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-7	233.2	n/a	4/4/2019	8100	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-8	233.2	n/a	4/4/2019	7700	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-9	233.2	n/a	4/4/2019	4500	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-6R	233.2	n/a	4/5/2019	7800	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2

Interwell Prediction Limit Summary - All Results

Plant Watson Client: Southern Company Data: Plant Watson AP CCR Printed 8/1/2019, 11:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	APMW-10	0.1472	n/a	4/4/2019	1.8	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-1R	0.1472	n/a	4/3/2019	5.3	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-2	0.1472	n/a	4/5/2019	3.6	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-3	0.1472	n/a	4/5/2019	4.5	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-4	0.1472	n/a	4/5/2019	1.6	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-5	0.1472	n/a	4/4/2019	5.8	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-7	0.1472	n/a	4/4/2019	0.98	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-8	0.1472	n/a	4/4/2019	20	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-9	0.1472	n/a	4/4/2019	6.1	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Boron (mg/L)	APMW-6R	0.1472	n/a	4/5/2019	8.9	Yes	6	0.1917	0.05374	0	None	sqrt(x)	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-10	20.55	n/a	4/4/2019	80	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-1R	20.55	n/a	4/3/2019	140	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-2	20.55	n/a	4/5/2019	310	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-3	20.55	n/a	4/5/2019	290	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-4	20.55	n/a	4/5/2019	170	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-5	20.55	n/a	4/4/2019	270	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-7	20.55	n/a	4/4/2019	98	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-8	20.55	n/a	4/4/2019	440	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-9	20.55	n/a	4/4/2019	270	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Calcium (mg/L)	APMW-6R	20.55	n/a	4/5/2019	440	Yes	6	14.83	1.602	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-10	23.44	n/a	4/4/2019	1200	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-1R	23.44	n/a	4/3/2019	1900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-2	23.44	n/a	4/5/2019	2600	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-3	23.44	n/a	4/5/2019	9900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-4	23.44	n/a	4/5/2019	3900	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-5	23.44	n/a	4/4/2019	8600	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-7	23.44	n/a	4/4/2019	3700	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-8	23.44	n/a	4/4/2019	3500	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-9	23.44	n/a	4/4/2019	3100	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Chloride (mg/L)	APMW-6R	23.44	n/a	4/5/2019	4000	Yes	6	11.7	3.289	0	None	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-10	0.7086	n/a	4/4/2019	0.63	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-1R	0.7086	n/a	4/3/2019	1ND	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-2	0.7086	n/a	4/5/2019	0.14	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-3	0.7086	n/a	4/5/2019	0.7	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-4	0.7086	n/a	4/5/2019	0.31	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-5	0.7086	n/a	4/4/2019	1ND	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-7	0.7086	n/a	4/4/2019	1ND	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-8	0.7086	n/a	4/4/2019	0.58	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-9	0.7086	n/a	4/4/2019	1ND	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
Fluoride (mg/L)	APMW-6R	0.7086	n/a	4/5/2019	1ND	No	6	0.13	0.162	33.33	Kaplan-Meier	No	0.0007523	Param Inter 1 of 2
pH (SU)	APMW-10	7.499	5.544	4/4/2019	6.74	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-1R	7.499	5.544	4/3/2019	6.56	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-2	7.499	5.544	4/5/2019	6.03	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-3	7.499	5.544	4/5/2019	6.7	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-4	7.499	5.544	4/5/2019	6.33	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-5	7.499	5.544	4/4/2019	6.35	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-7	7.499	5.544	4/4/2019	6.33	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-8	7.499	5.544	4/4/2019	6.72	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-9	7.499	5.544	4/4/2019	6.17	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2
pH (SU)	APMW-6R	7.499	5.544	4/5/2019	6.12	No	6	6.522	0.2737	0	None	No	0.0003761	Param Inter 1 of 2

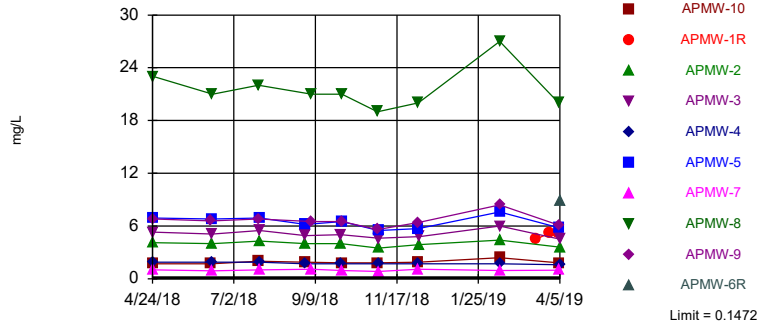
Interwell Prediction Limit Summary - All Results

Plant Watson Client: Southern Company Data: Plant Watson AP CCR Printed 8/1/2019, 11:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate (mg/L)	APMW-10	5.368	n/a	4/4/2019	240	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-1R	5.368	n/a	4/3/2019	4.6	No	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-2	5.368	n/a	4/5/2019	7	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-3	5.368	n/a	4/5/2019	1200	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-4	5.368	n/a	4/5/2019	330	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-5	5.368	n/a	4/4/2019	1100	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-7	5.368	n/a	4/4/2019	61	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-8	5.368	n/a	4/4/2019	640	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-9	5.368	n/a	4/4/2019	330	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Sulfate (mg/L)	APMW-6R	5.368	n/a	4/5/2019	800	Yes	6	1.598	1.056	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-10	233.2	n/a	4/4/2019	2500	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-1R	233.2	n/a	4/3/2019	3600	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-2	233.2	n/a	4/5/2019	5000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-3	233.2	n/a	4/5/2019	18000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-4	233.2	n/a	4/5/2019	7000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-5	233.2	n/a	4/4/2019	18000	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-7	233.2	n/a	4/4/2019	8100	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-8	233.2	n/a	4/4/2019	7700	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-9	233.2	n/a	4/4/2019	4500	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	APMW-6R	233.2	n/a	4/5/2019	7800	Yes	6	115.5	32.95	0	None	No	0.0007523	Param Inter 1 of 2

Exceeds Limit: APMW-10, APMW-1R, APMW-2, APMW-3, APMW-4, APMW-5, AP

Prediction Limit
Interwell Parametric

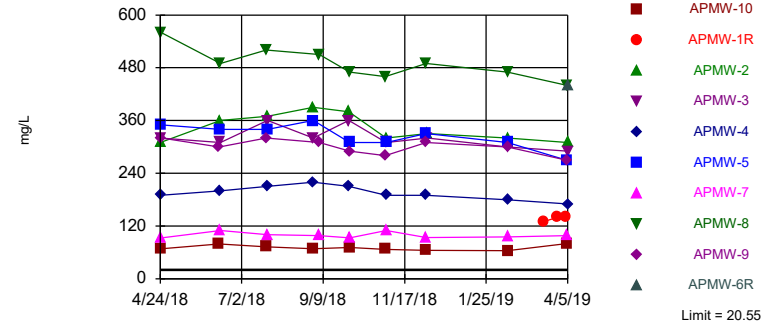


Background Data Summary (based on square root transformation): Mean=0.1917, Std. Dev.=0.05374, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7201, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Boron Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Exceeds Limit: APMW-10, APMW-1R, APMW-2, APMW-3, APMW-4, APMW-5, AP

Prediction Limit
Interwell Parametric

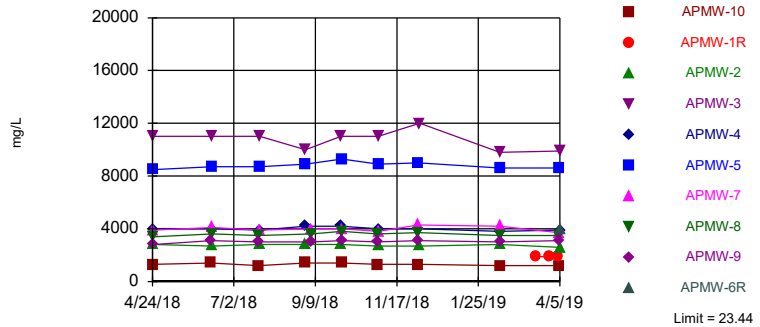


Background Data Summary: Mean=14.83, Std. Dev.=1.602, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Calcium Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Exceeds Limit: APMW-10, APMW-1R, APMW-2, APMW-3, APMW-4, APMW-5, AP

Prediction Limit
Interwell Parametric

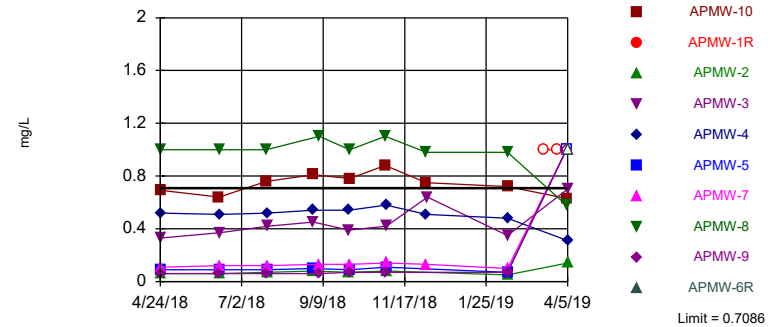


Background Data Summary: Mean=11.7, Std. Dev.=3.289, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7938, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Chloride Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Within Limit

Prediction Limit
Interwell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.13, Std. Dev.=0.162, n=6, 33.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7912, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Fluoride Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	1.9	4.1	5.3						
4/25/2018				1.7	6.8	23	1	6.9	
6/13/2018				1.7	6.6				
6/14/2018	1.9	4	5.1			21	0.91	6.8	
7/23/2018				2	6.8	22			
7/24/2018	1.9	4.3	5.5				1	6.9	
9/1/2018	1.7	4	4.9	1.9				6.2	
9/6/2018					6.5	21	1.1		
10/1/2018	1.7	4	5						
10/2/2018				1.8	6.5	21	0.95	6.5	
11/1/2018				1.8	5.6	19			
11/2/2018	1.7	3.5	4.6				0.82	5.5	
12/6/2018	1.7			1.9	6.4	20	1.1	5.7	
12/7/2018		3.9	4.8						
2/13/2019	1.7	4.4	6	2.4	8.4	27	0.95	7.6	
3/16/2019									4.5
3/27/2019									5.2
4/3/2019									5.3
4/4/2019				1.8	6.1	20	0.98	5.8	
4/5/2019	1.6	3.6	4.5						

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	0.035 (J)	0.028 (J)	
3/27/2019	0.033 (J)	0.027 (J)	
4/3/2019	0.023 (J)	0.089	
4/4/2019			
4/5/2019			8.9

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	190	310	320						
4/25/2018				68	320	560	93	350	
6/13/2018				79	300				
6/14/2018	200	360	310			490	110	340	
7/23/2018				73	320	520			
7/24/2018	210	370	360				100	340	
9/1/2018	220	390	320	68				360	
9/6/2018					310	510	98		
10/1/2018	210	380	360						
10/2/2018				71	290	470	93	310	
11/1/2018				67	280	460			
11/2/2018	190	320	310				110	310	
12/6/2018	190			65	310	490	94	330	
12/7/2018		330	320						
2/13/2019	180	320	300	64	300	470	95	310	
3/16/2019									130
3/27/2019									140
4/3/2019									140
4/4/2019				80	270	440	98	270	
4/5/2019	170	310	290						

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	13	17	
3/27/2019	15	16	
4/3/2019	13	15	
4/4/2019			
4/5/2019			440

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	4000	2800	11000						
4/25/2018				1300	2800	3400	3900	8500	
6/13/2018				1400	3100				
6/14/2018	4000	2700	11000			3600	4100	8700	
7/23/2018				1200	3000	3500			
7/24/2018	3900	2800	11000				3900	8700	
9/1/2018	4200	2800	10000	1400				8900	
9/6/2018					3000	3600	4000		
10/1/2018	4200	2800	11000						
10/2/2018				1400	3100	3800	4000	9300	
11/1/2018				1300	3000	3600			
11/2/2018	4000	2700	11000				3800	8900	
12/6/2018	4000			1300	3100	3700	4300	9000	
12/7/2018		2700	12000						
2/13/2019	3800	2800	9800	1200	3000	3500	4200	8600	
3/16/2019									1900
3/27/2019									1900
4/3/2019									1900
4/4/2019				1200	3100	3500	3700	8600	
4/5/2019	3900	2600	9900						

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	14	9.3	
3/27/2019	15	8.2	
4/3/2019	15	8.7	
4/4/2019			
4/5/2019			4000

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	0.52	0.06 (J)	0.33						
4/25/2018				0.69	0.06 (J)	1	0.11	0.09 (J)	
6/13/2018				0.64	0.06 (J)				
6/14/2018	0.51	0.06 (J)	0.37			1	0.12	0.09 (J)	
7/23/2018				0.76	0.06 (J)	1			
7/24/2018	0.52	0.07 (J)	0.42				0.12	0.09 (J)	
9/1/2018	0.54	0.08 (J)	0.45	0.81				0.1	
9/6/2018					0.06 (J)	1.1	0.13		
10/1/2018	0.54	0.07 (J)	0.39						
10/2/2018				0.78	0.07 (J)	1	0.13	0.09 (J)	
11/1/2018				0.88	0.07 (J)	1.1			
11/2/2018	0.58	0.08 (J)	0.42				0.14	0.11	
12/6/2018	0.51			0.75	0.21 (o)	0.98	0.13	1.4 (o)	
12/7/2018		4.3 (o)	0.64						
2/13/2019	0.48	0.05 (J)	0.35	0.72	0.07 (J)	0.98	0.1	0.07 (J)	
3/16/2019									<2
3/27/2019									<2
4/3/2019									<2
4/4/2019				0.63	<2	0.58 (J)	<2	<2	
4/5/2019	0.31 (J)	0.14 (J)	0.7 (J)						

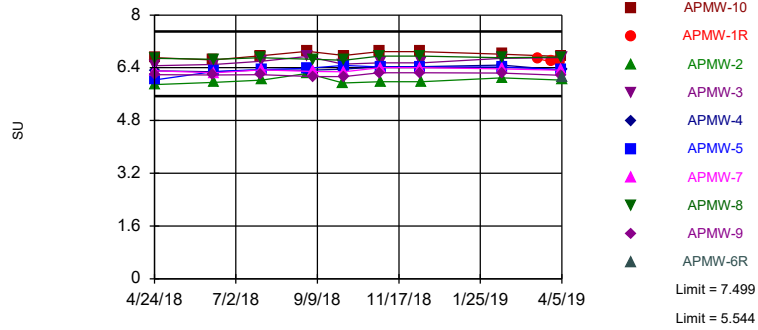
Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 7/29/2019 4:28 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	0.041 (J)	0.047 (J)	
3/27/2019	0.49	<2	
4/3/2019	0.086 (J)	<2	
4/4/2019			
4/5/2019			<2

Within Limits

Prediction Limit
Interwell Parametric



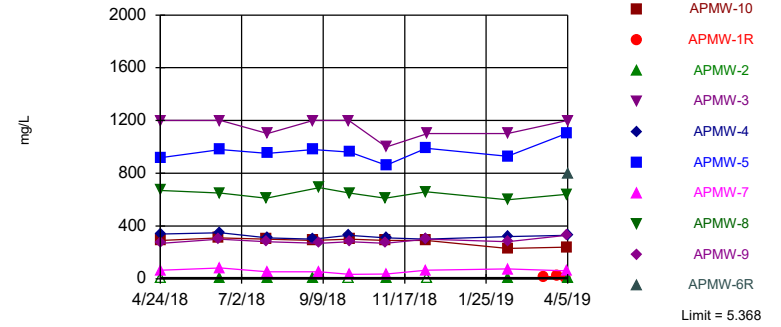
Background Data Summary: Mean=6.522, Std. Dev.=0.2737, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9363, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0003761. Comparing 10 points to limit.

Constituent: pH Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Hollow symbols indicate censored values.

Exceeds Limit: APMW-10, APMW-2, APMW-3, APMW-4, APMW-5, APMW-7, APMW-8..

Prediction Limit
Interwell Parametric

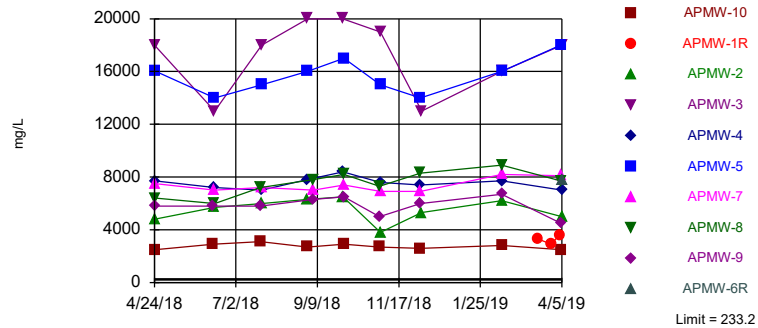


Background Data Summary: Mean=1.598, Std. Dev.=1.056, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7899, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Sulfate Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Exceeds Limit: APMW-10, APMW-1R, APMW-2, APMW-3, APMW-4, APMW-5, AP

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=115.5, Std. Dev.=32.95, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.925, critical = 0.713. Kappa = 3.571 (c=7, w=10, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0007523. Comparing 10 points to limit.

Constituent: Total Dissolved Solids Analysis Run 7/29/2019 4:21 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Prediction Limit

Constituent: pH (SU) Analysis Run 7/29/2019 4:29 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	6.31	5.89	6.46						
4/25/2018				6.7	6.19	6.69	6.31	6.04	
6/13/2018				6.64	6.18				
6/14/2018	6.28	5.96	6.5			6.66	6.25	6.29	
7/23/2018				6.76	6.19	6.7			
7/24/2018	6.34	6.03	6.6				6.34	6.35	
9/1/2018	6.33	6.23	6.74	6.9				6.38	
9/6/2018					6.13	6.66	6.29		
10/1/2018	6.36	5.94	6.51						
10/2/2018				6.77	6.13	6.63	6.28	6.47	
11/1/2018				6.89	6.25	6.75			
11/2/2018	6.43	5.98	6.55				6.4	6.42	
12/6/2018	6.43			6.89	6.25	6.75	6.4	6.42	
12/7/2018		5.98	6.55						
2/13/2019	6.48	6.09	6.69	6.81	6.24	6.7	6.37	6.42	
3/16/2019									6.67
3/27/2019									6.59
4/3/2019									6.56
4/4/2019				6.74	6.17	6.72	6.33	6.35	
4/5/2019	6.33	6.03	6.7						

Prediction Limit

Constituent: pH (SU) Analysis Run 7/29/2019 4:29 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	6.44	6.97	
3/27/2019	6.38	6.7	
4/3/2019	6.19	6.45	
4/4/2019			
4/5/2019			6.12

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 7/29/2019 4:29 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	340	<5	1200						
4/25/2018				290	270	670	65	920	
6/13/2018				310	300				
6/14/2018	350	7.2	1200			650	81	980	
7/23/2018				300	280	610			
7/24/2018	310	2.7 (J)	1100				52	950	
9/1/2018	300	1.5 (J)	1200	290				980	
9/6/2018					270	690	53		
10/1/2018	330	<5	1200						
10/2/2018				300	280	650	34	960	
11/1/2018				290	270	610			
11/2/2018	310	1.9 (J)	1000				35	860	
12/6/2018	300			290	300	660	65	990	
12/7/2018		<5	1100						
2/13/2019	320	1.5 (J)	1100	230	280	600	74	930	
3/16/2019									14
3/27/2019									19
4/3/2019									4.6 (J)
4/4/2019				240	330	640	61	1100	
4/5/2019	330	7	1200						

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 7/29/2019 4:29 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	0.88 (J)	3.6	
3/27/2019	1.3	0.81 (J)	
4/3/2019	1.9	1.1	
4/4/2019			
4/5/2019			800

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2019 4:29 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-4	APMW-2	APMW-3	APMW-10	APMW-9	APMW-8	APMW-7	APMW-5	APMW-1R
4/24/2018	7700	4800	18000						
4/25/2018				2500	5800	6400	7500	16000	
6/13/2018				2900	5800				
6/14/2018	7200	5700	13000			6000	7000	14000	
7/23/2018				3100	5800	7200			
7/24/2018	7000	6000	18000				7200	15000	
9/1/2018	7800	6300	20000	2700				16000	
9/6/2018					6300	7800	7000		
10/1/2018	8400	6500	20000						
10/2/2018				2900	6500	8200	7400	17000	
11/1/2018				2700	5000	7300			
11/2/2018	7600	3800	19000				6900	15000	
12/6/2018	7400			2600	6000	8300	6900	14000	
12/7/2018		5300	13000						
2/13/2019	7700	6200	16000	2800	6700	8900	8200	16000	
3/16/2019									3300
3/27/2019									2900
4/3/2019									3600
4/4/2019				2500	4500	7700	8100	18000	
4/5/2019	7000	5000	18000						

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/29/2019 4:29 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-12 (bg)	APMW-11 (bg)	APMW-6R
4/24/2018			
4/25/2018			
6/13/2018			
6/14/2018			
7/23/2018			
7/24/2018			
9/1/2018			
9/6/2018			
10/1/2018			
10/2/2018			
11/1/2018			
11/2/2018			
12/6/2018			
12/7/2018			
2/13/2019			
3/16/2019	150	120	
3/27/2019	110	63	
4/3/2019	150	100	
4/4/2019			
4/5/2019			7800

Trend Test Summary Table - All Results (No Significant)

Plant Watson Client: Southern Company Data: Plant Watson AP CCR Printed 8/1/2019, 12:31 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	APMW-10	0.2101	11	25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-1R	2.468	7	21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-2	-0.3489	-11	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-3	-0.7732	-14	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-4	-0.3017	-23	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-5	-1.204	-11	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-7	0	-1	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-8	-2.474	-12	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-9	-0.6338	-14	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-11 (bg)	0	4	21	No	8	37.5	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-12 (bg)	0.05675	5	21	No	8	25	n/a	n/a	0.01	NP
Boron (mg/L)	APMW-6R	4.461	11	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-10	-7.416	-11	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-1R	0	3	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-2	-60.59	-8	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-3	-33.54	-15	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-4	-36.28	-16	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-5	-77.05	-22	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-7	0	-1	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-8	-98.52	-24	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-9	-36.36	-19	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-11 (bg)	-34.84	-19	-21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-12 (bg)	0	5	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	APMW-6R	270.7	16	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-10	-165.8	-13	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-1R	0	10	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-2	0	-11	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-3	0	-8	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-4	-114.6	-10	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-5	115.1	5	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-7	0	0	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-8	0	4	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-9	0	10	25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-11 (bg)	0.6518	4	18	No	7	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-12 (bg)	0	0	18	No	7	0	n/a	n/a	0.01	NP
Chloride (mg/L)	APMW-6R	0	4	21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-10	-54.6	-19	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-1R	-18.08	-4	-21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-2	-0.1237	-4	-25	No	9	33.33	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-3	0	-7	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-4	-23.78	-7	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-5	71.7	9	25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-7	-2.122	-1	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-8	-33.46	-12	-25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-9	22.81	11	25	No	9	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-11 (bg)	2.861	4	18	No	7	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-12 (bg)	2.671	4	18	No	7	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	APMW-6R	71.13	7	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-10	-323.1	-9	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-1R	1698	7	18	No	7	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-2	284.4	2	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-3	0	-1	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-4	-205.7	-4	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-5	2053	9	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-7	318.3	2	25	No	9	0	n/a	n/a	0.01	NP

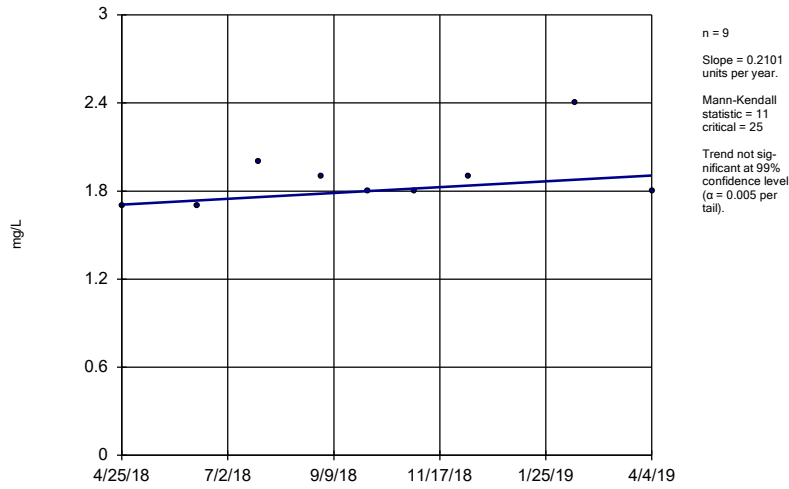
Trend Test Summary Table - All Results (No Significant)

Plant Watson Client: Southern Company Data: Plant Watson AP CCR Printed 8/1/2019, 12:31 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Total Dissolved Solids (mg/L)	APMW-8	2990	22	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-9	162.2	3	25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-11 (bg)	114.5	6	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-12 (bg)	0	3	21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	APMW-6R	2981	6	21	No	8	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

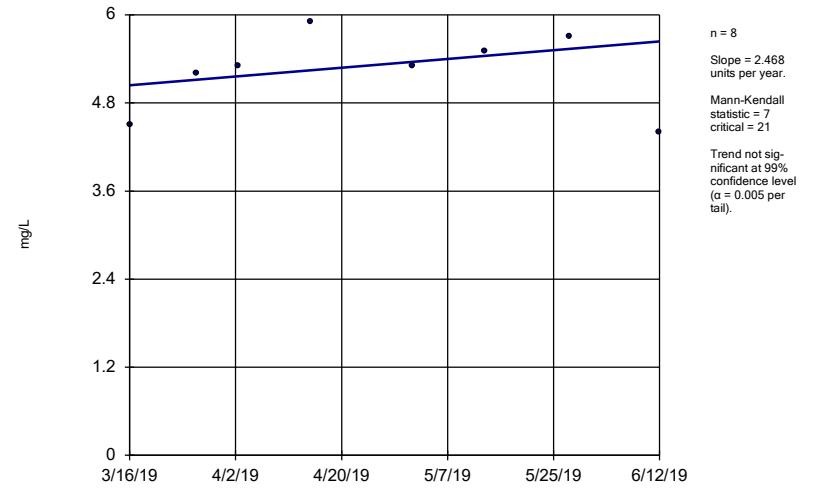
APMW-10



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

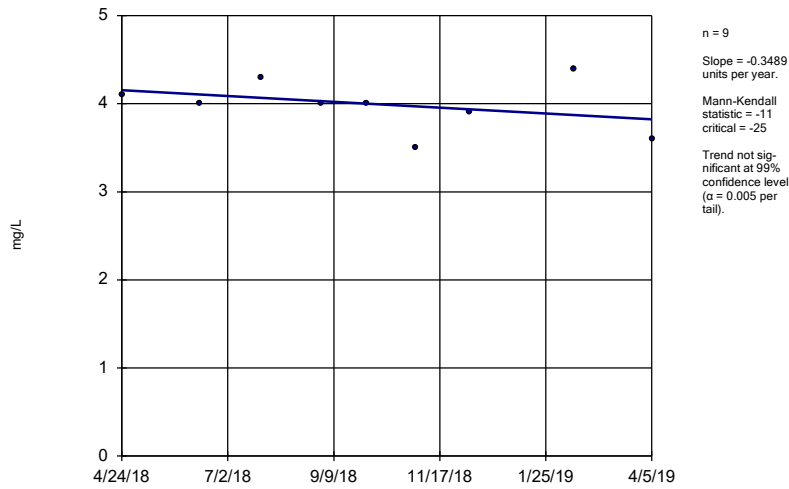
APMW-1R



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

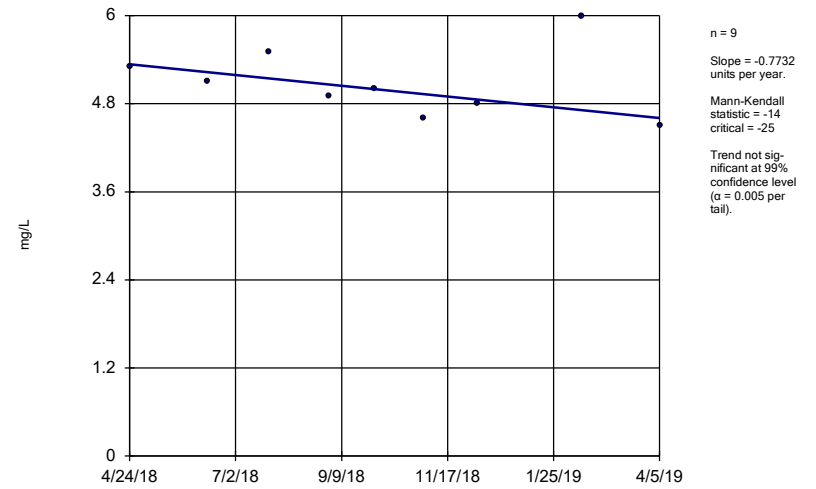
APMW-2



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

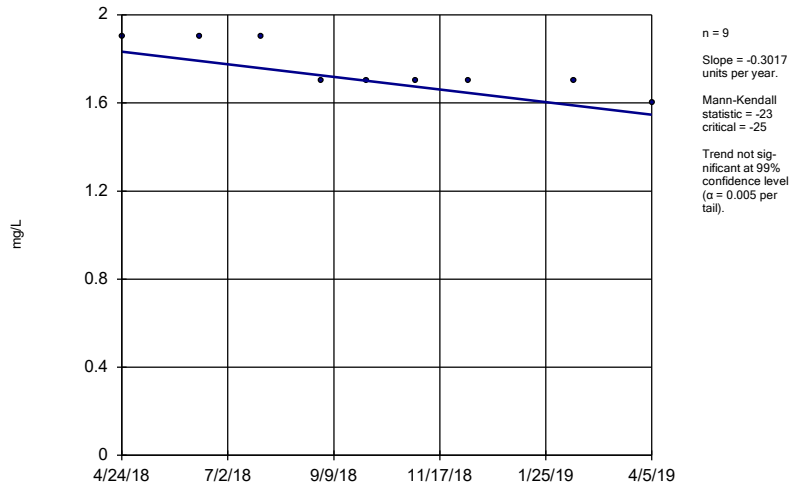
APMW-3



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

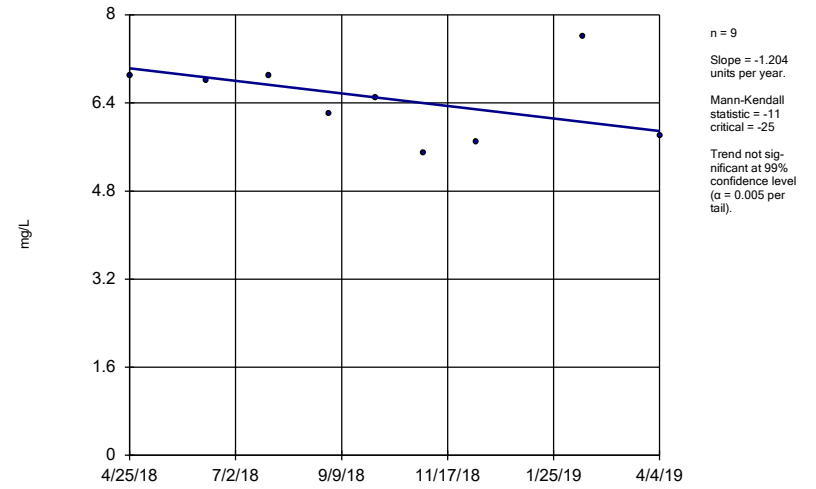
APMW-4



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

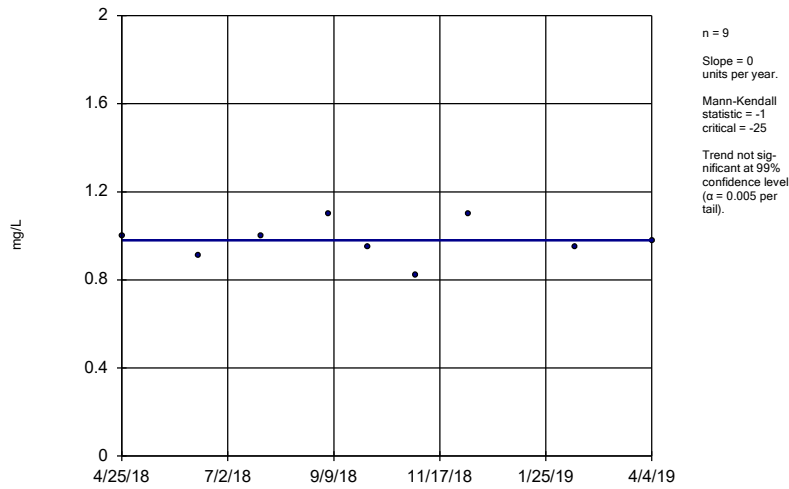
APMW-5



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

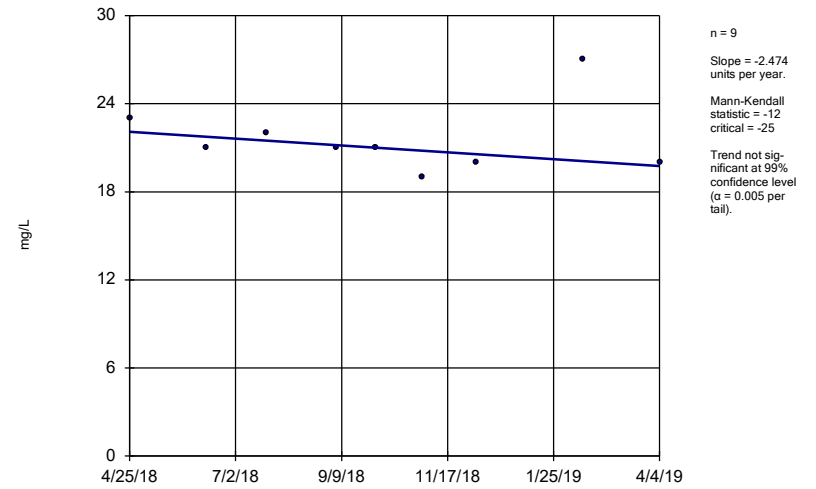
APMW-7



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

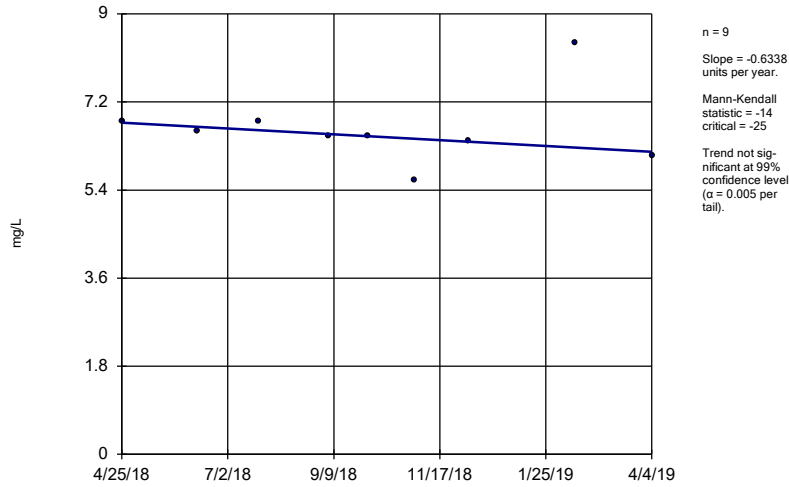
APMW-8



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

APMW-9

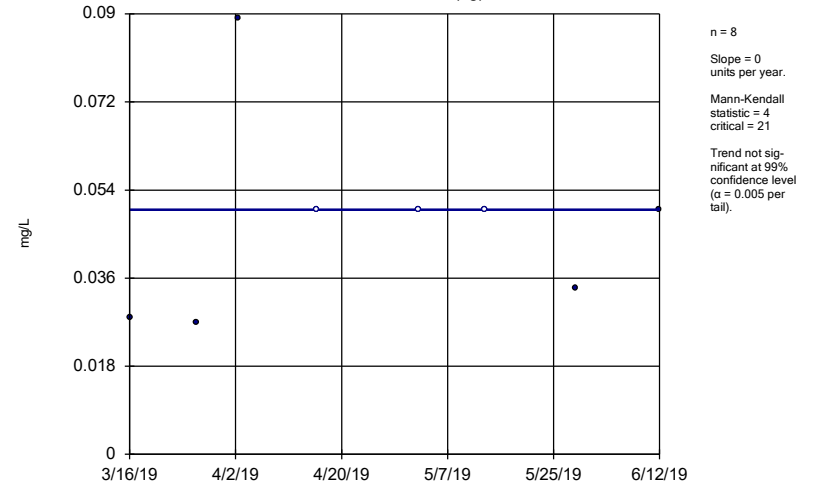


Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-11 (bg)

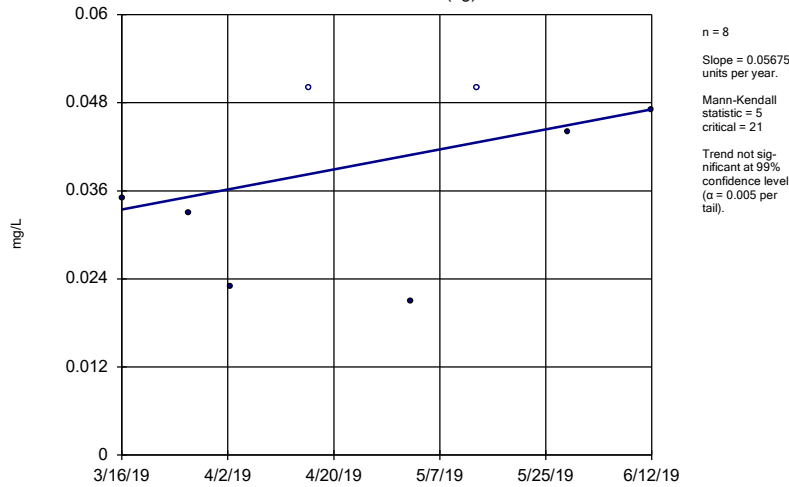


Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Hollow symbols indicate censored values.

Sen's Slope Estimator

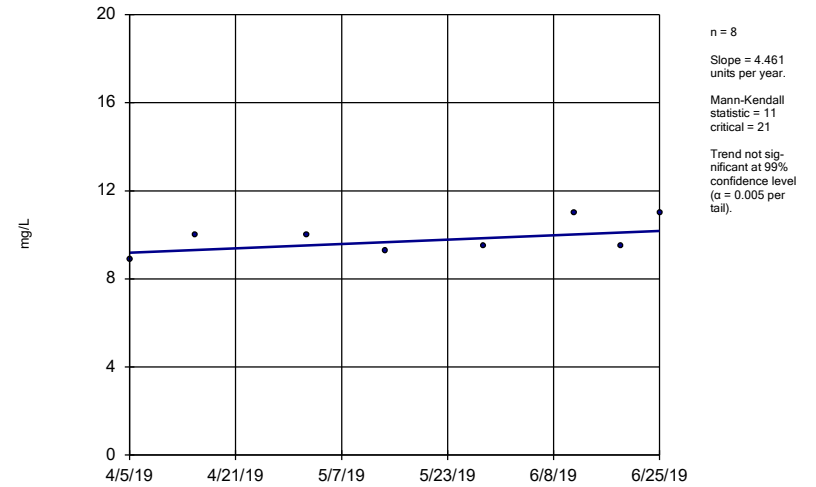
APMW-12 (bg)



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

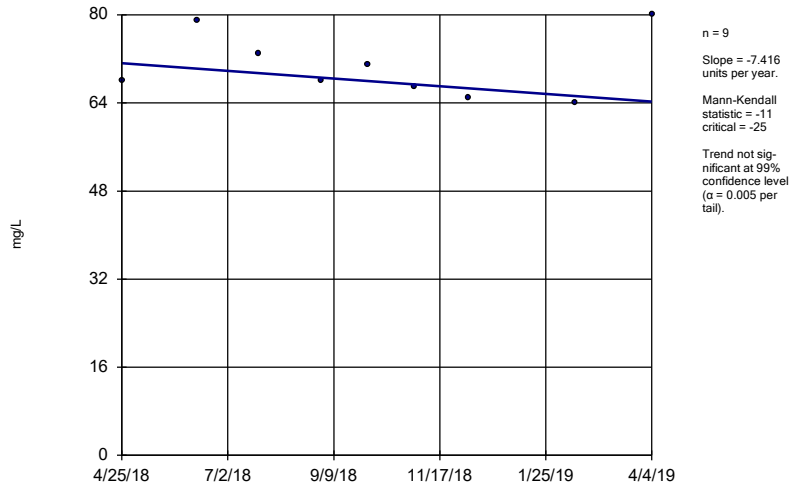
APMW-6R



Constituent: Boron Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

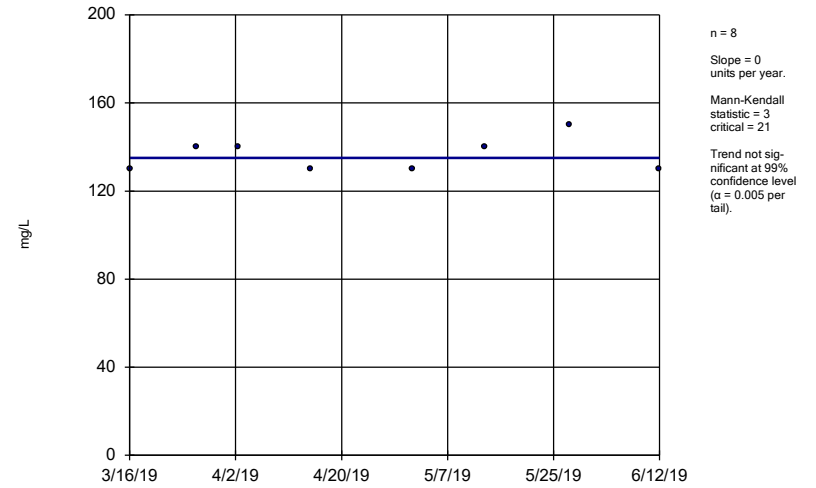
APMW-10



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

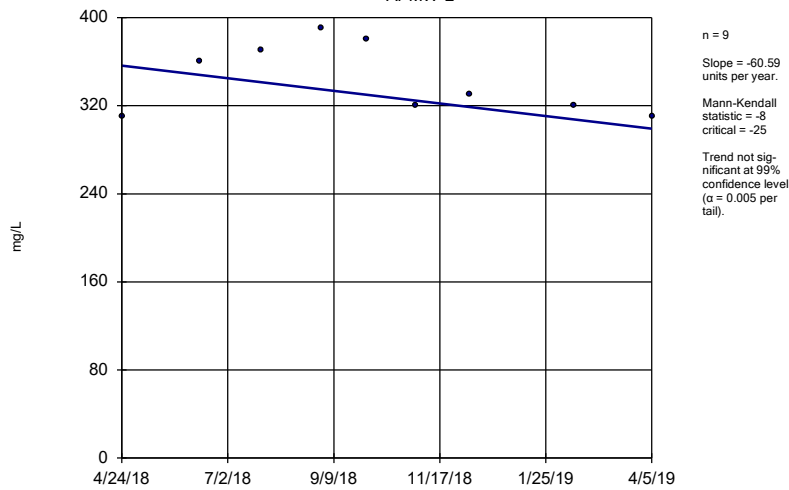
APMW-1R



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

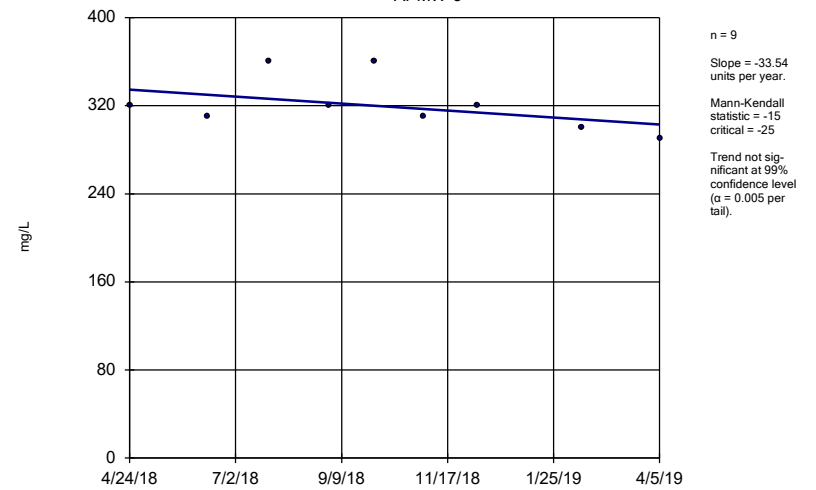
APMW-2



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

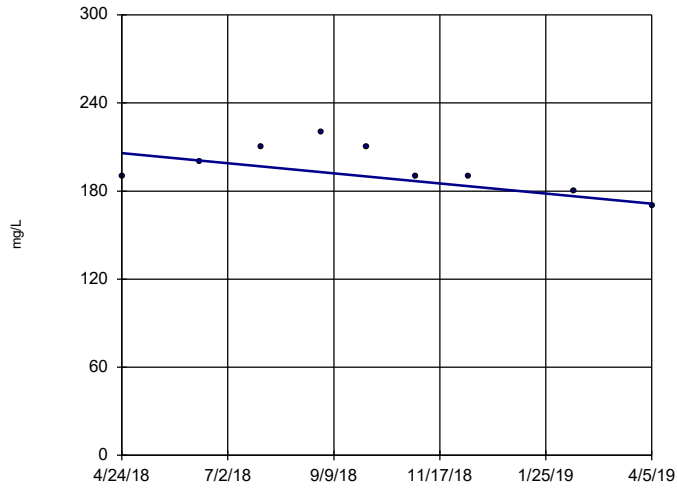
APMW-3



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

APMW-4

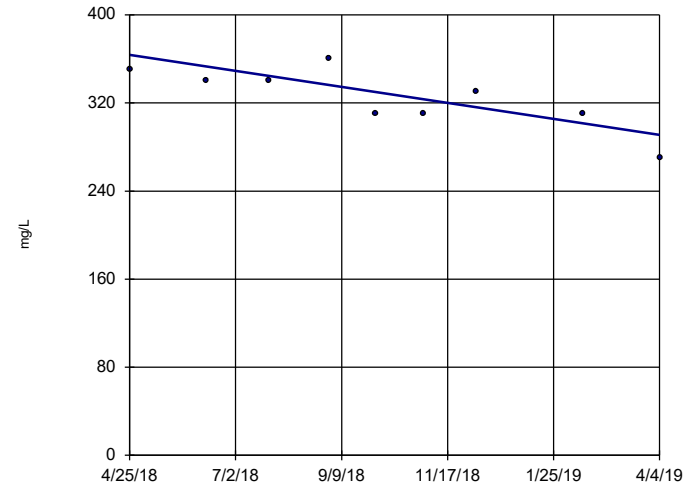


n = 9
 Slope = -36.28
 units per year.
 Mann-Kendall
 statistic = -16
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

APMW-5

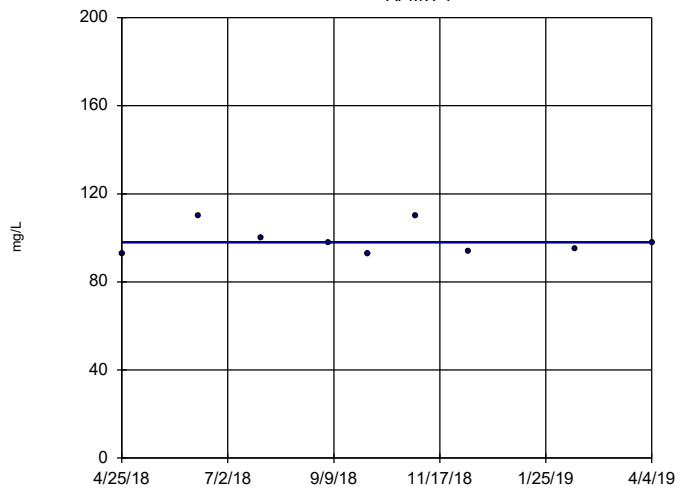


n = 9
 Slope = -77.05
 units per year.
 Mann-Kendall
 statistic = -22
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

APMW-7

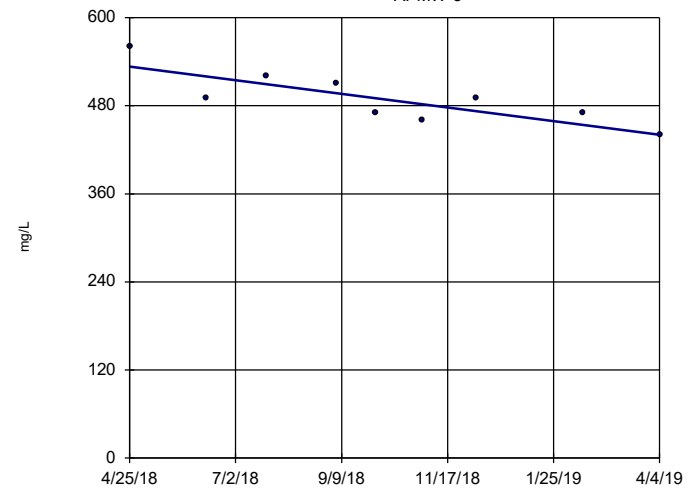


n = 9
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = -1
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

APMW-8

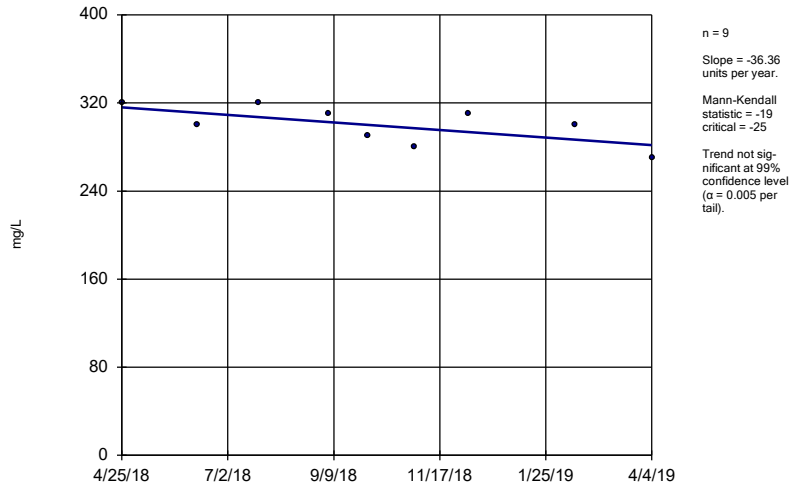


n = 9
 Slope = -98.52
 units per year.
 Mann-Kendall
 statistic = -24
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

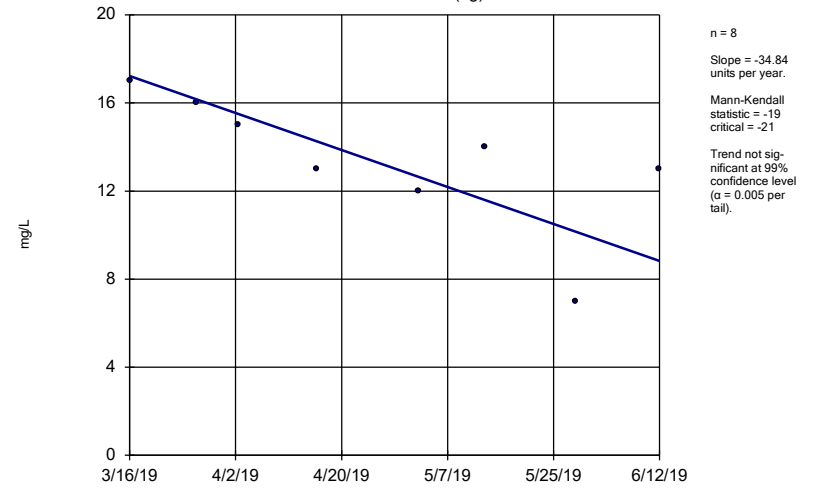
APMW-9



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

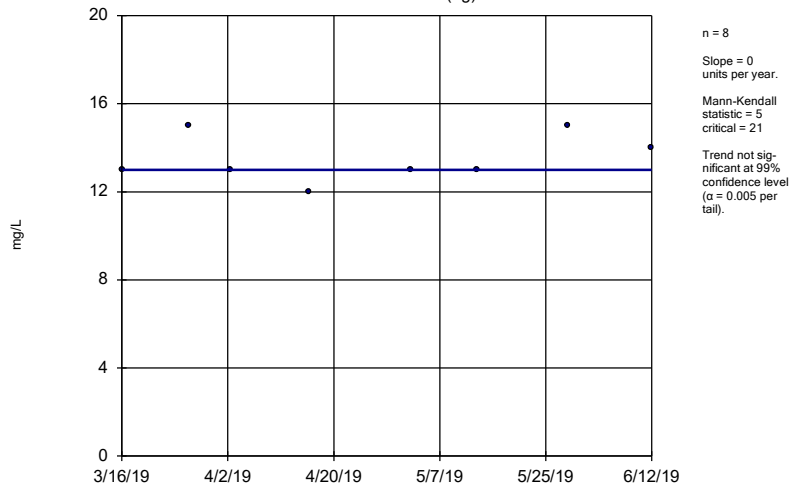
APMW-11 (bg)



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

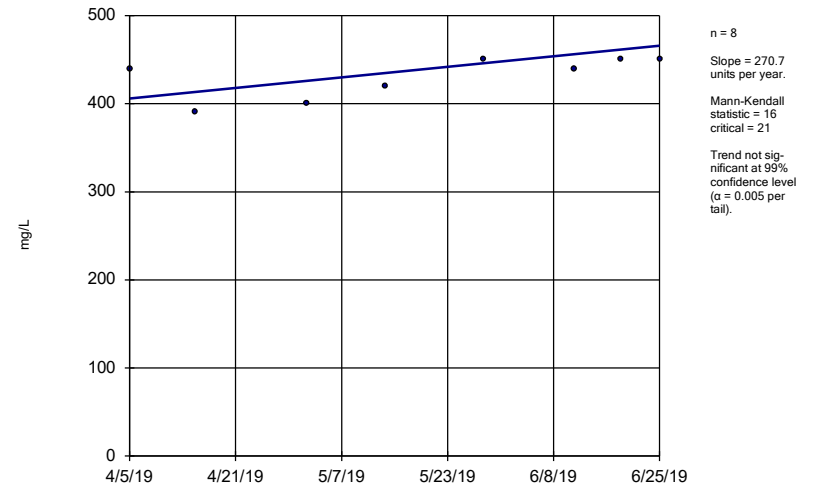
APMW-12 (bg)



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

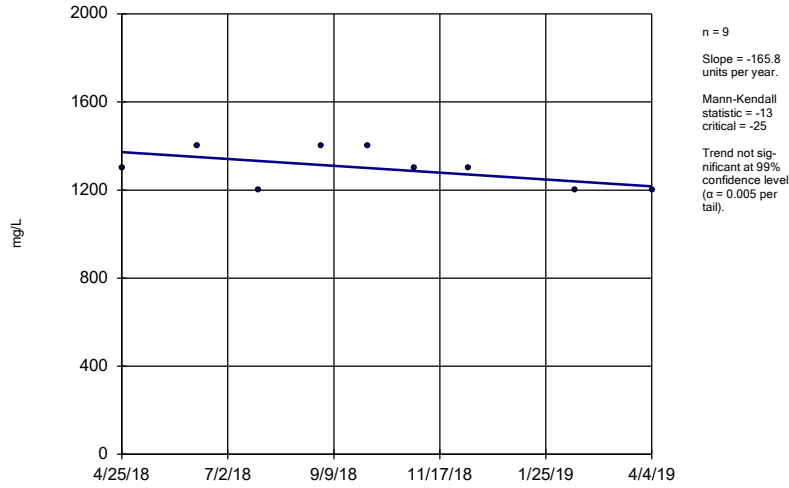
APMW-6R



Constituent: Calcium Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

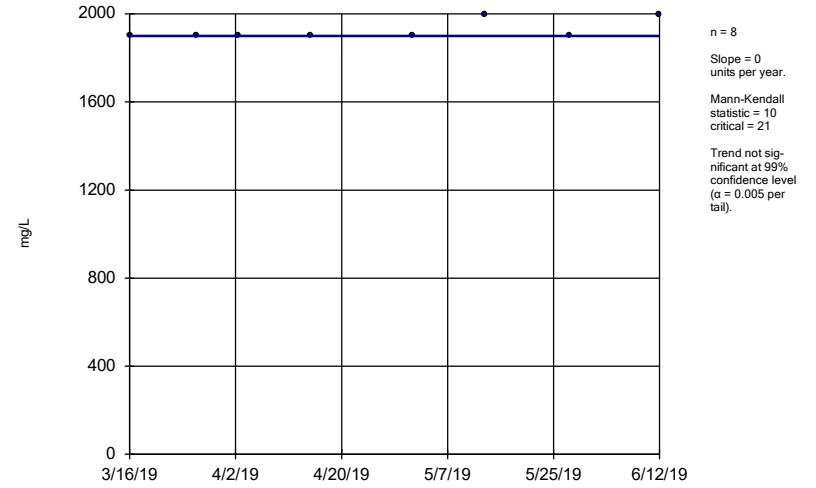
APMW-10



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

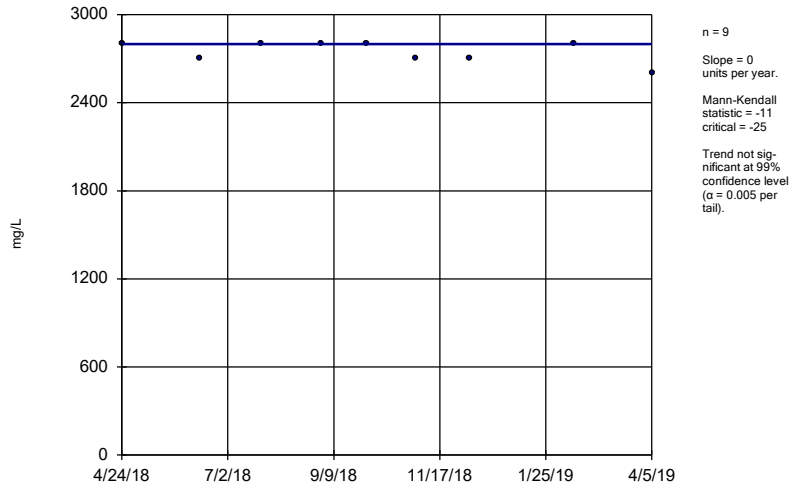
APMW-1R



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

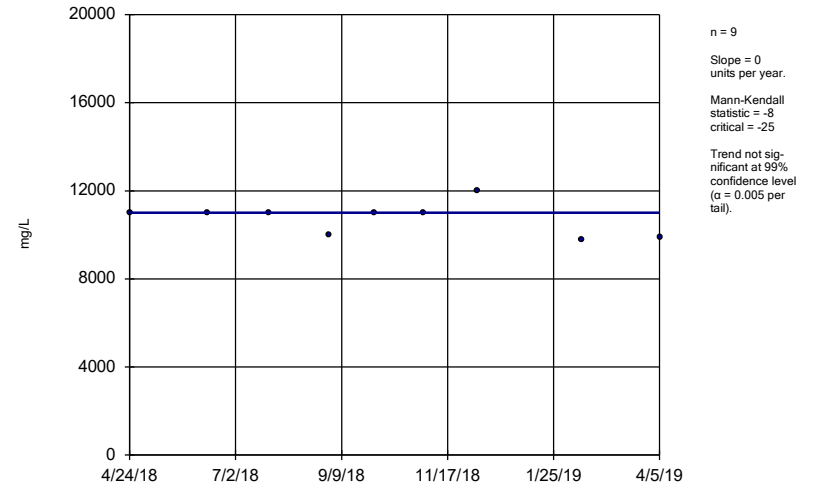
APMW-2



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

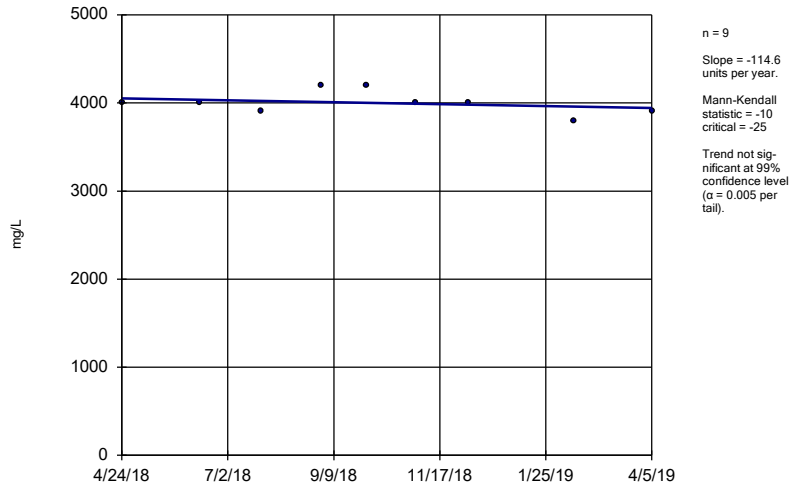
APMW-3



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

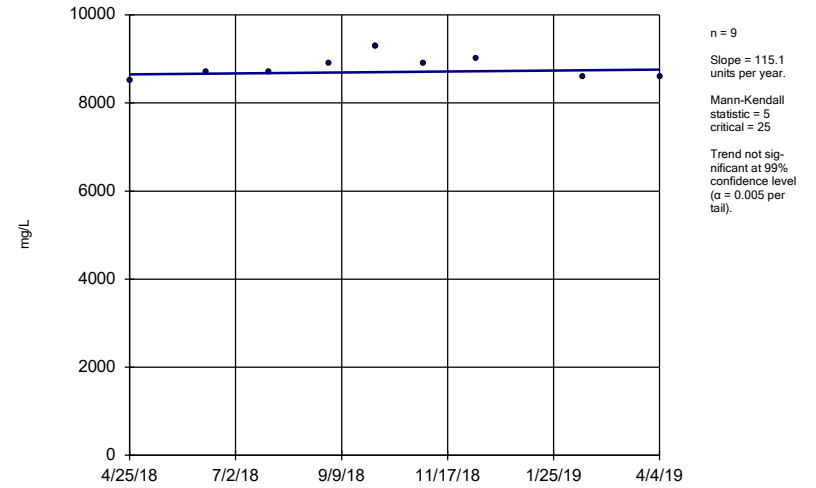
APMW-4



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

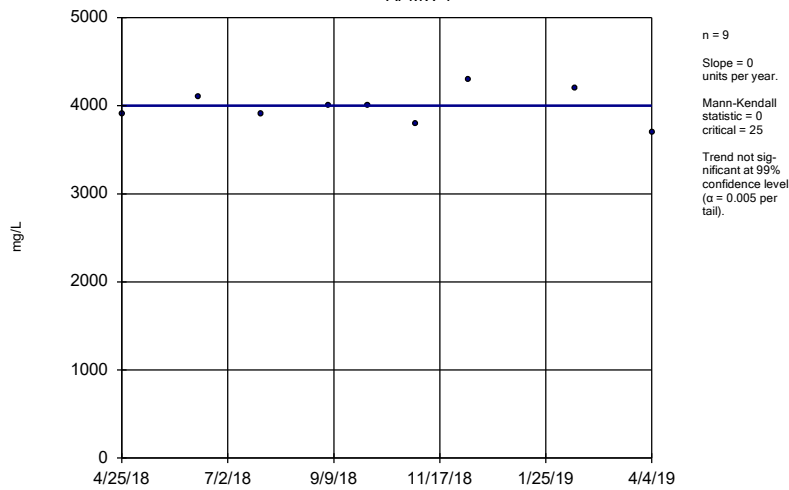
APMW-5



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

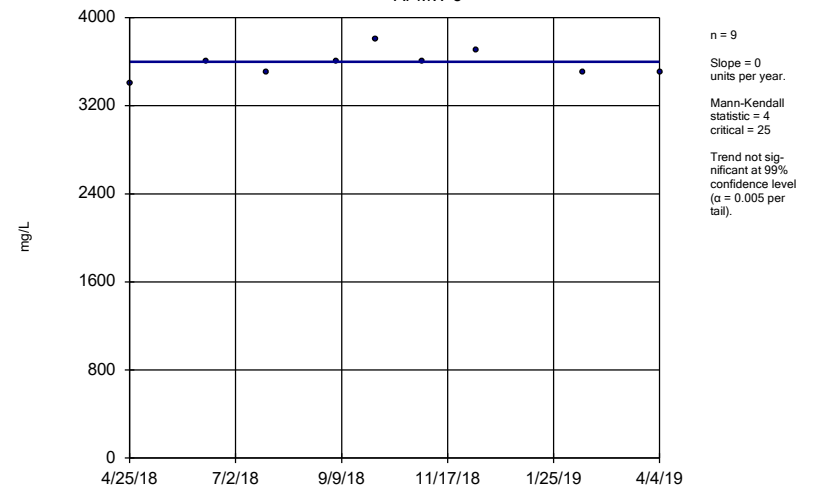
APMW-7



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

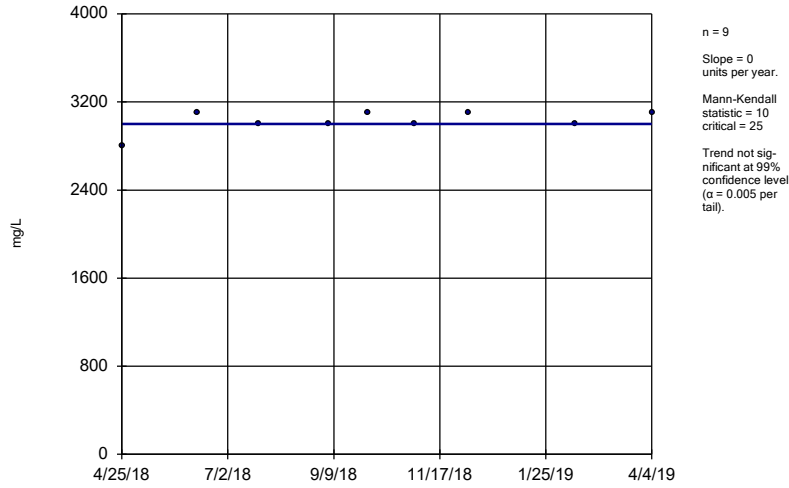
APMW-8



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

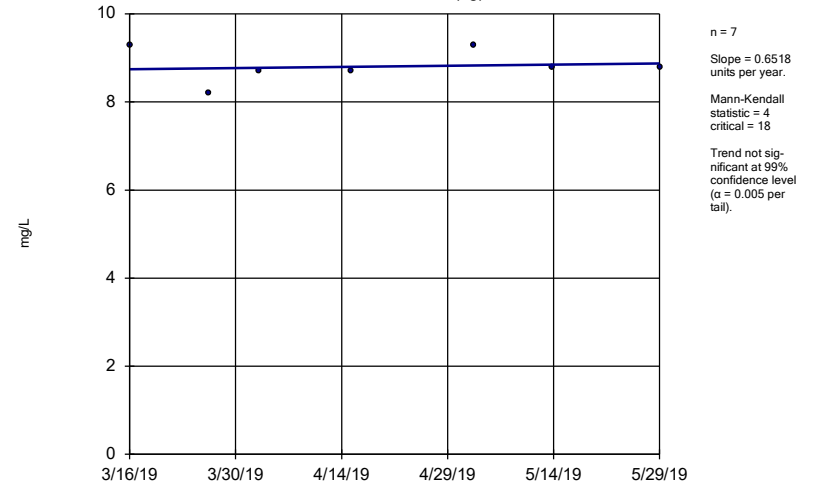
APMW-9



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

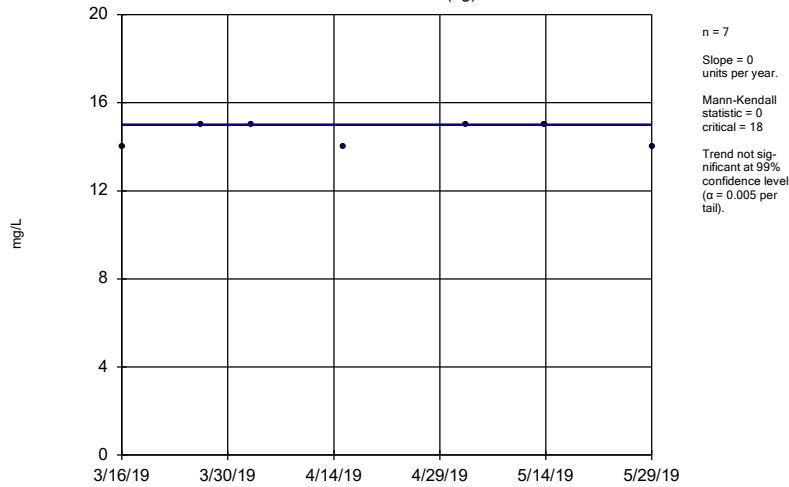
APMW-11 (bg)



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

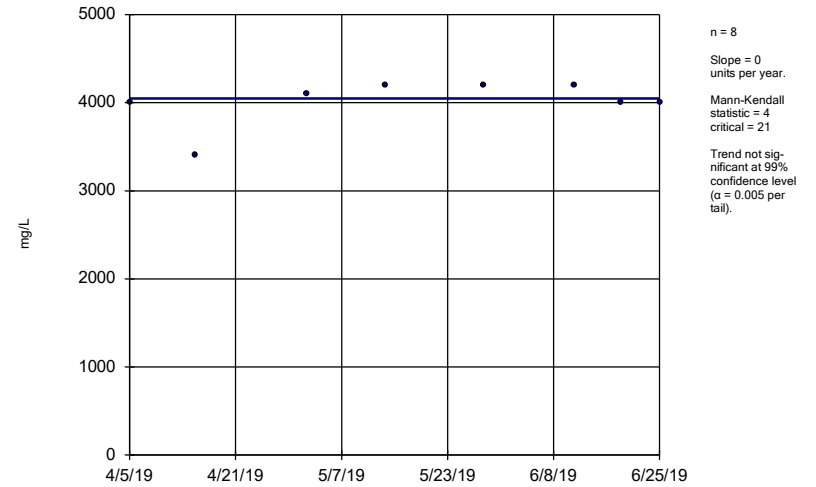
APMW-12 (bg)



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

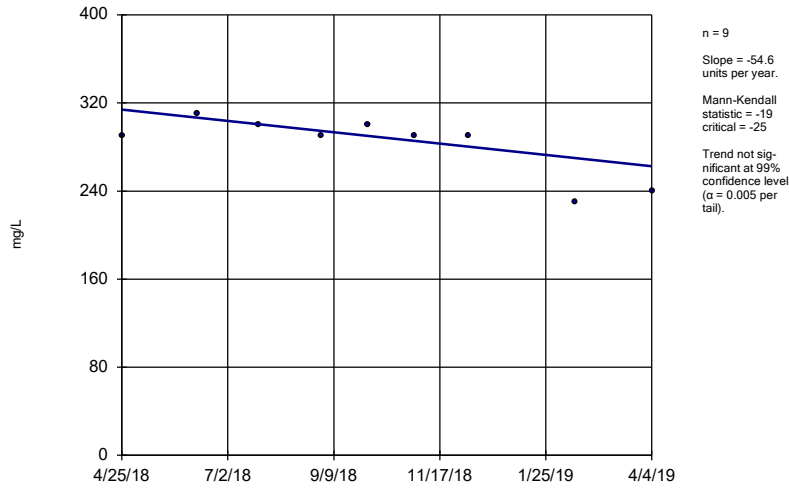
APMW-6R



Constituent: Chloride Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

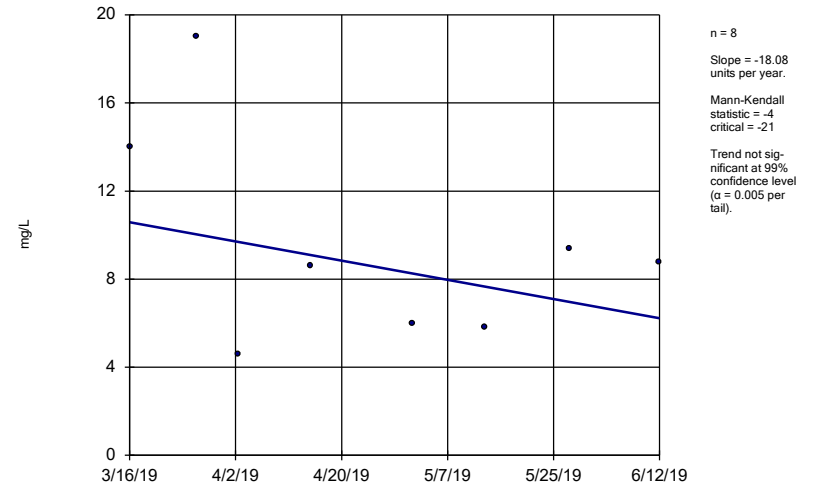
APMW-10



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

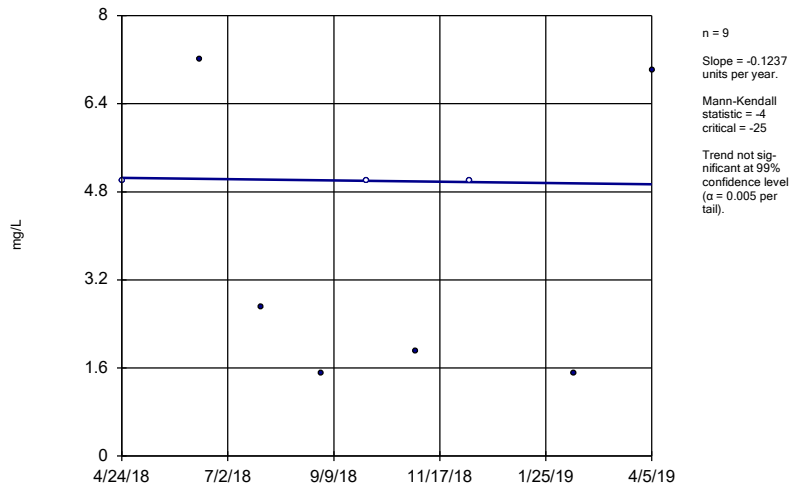
APMW-1R



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

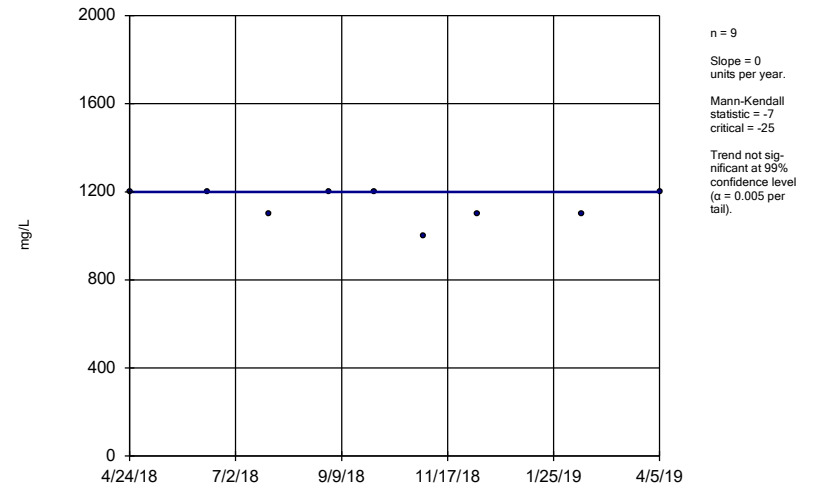
APMW-2



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

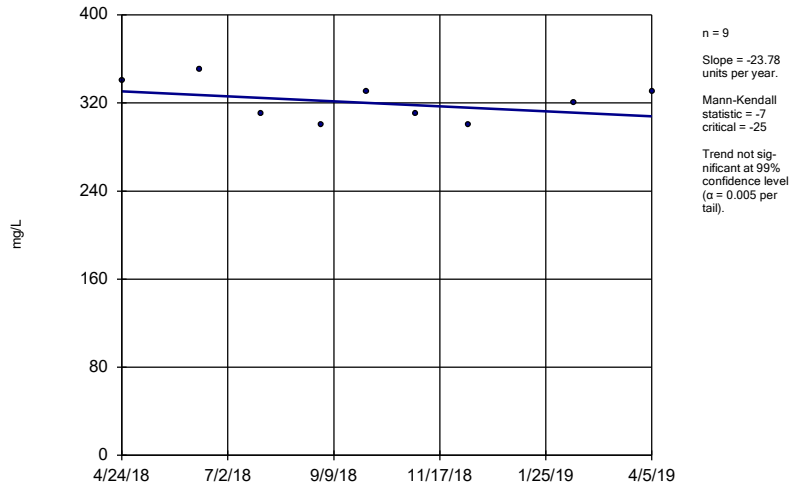
APMW-3



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

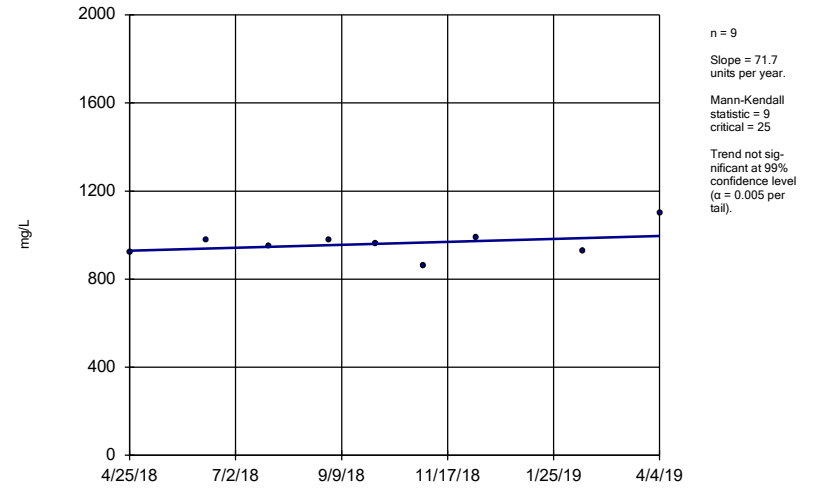
APMW-4



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

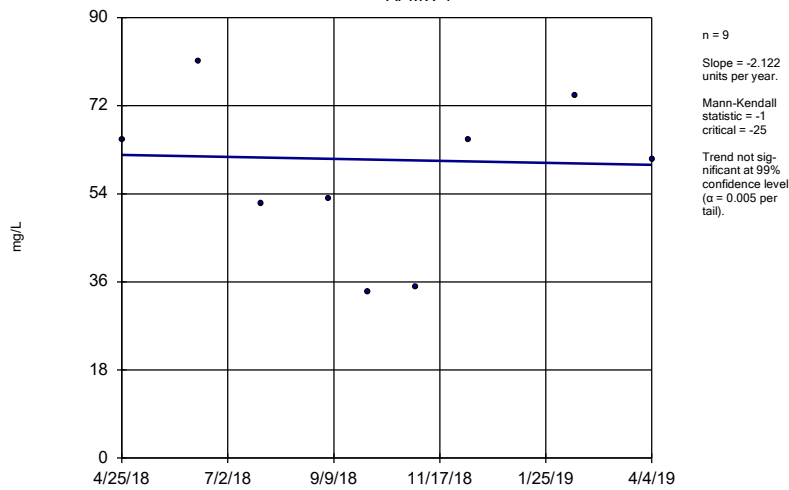
APMW-5



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

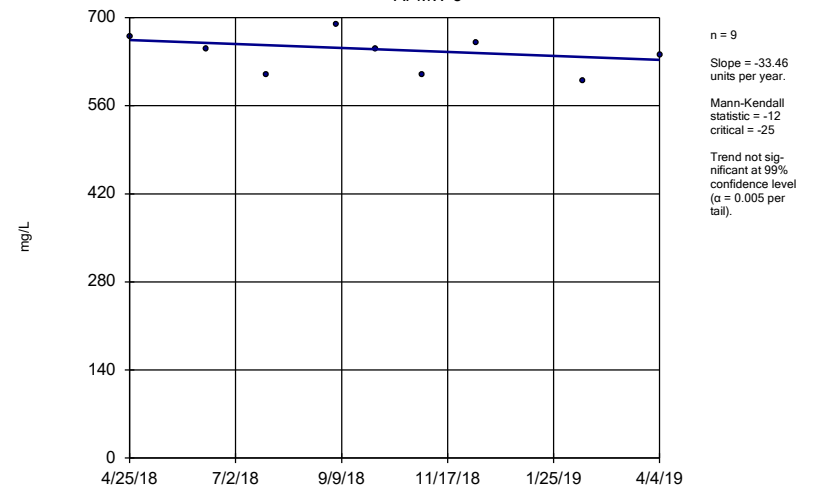
APMW-7



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

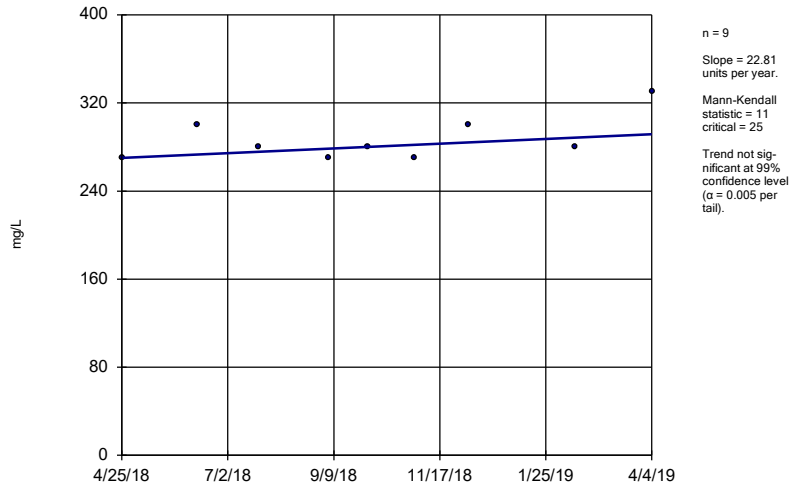
APMW-8



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

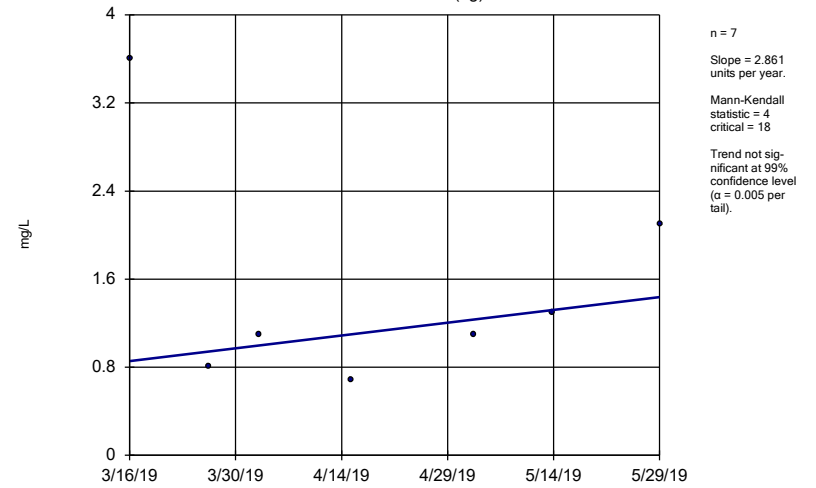
APMW-9



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

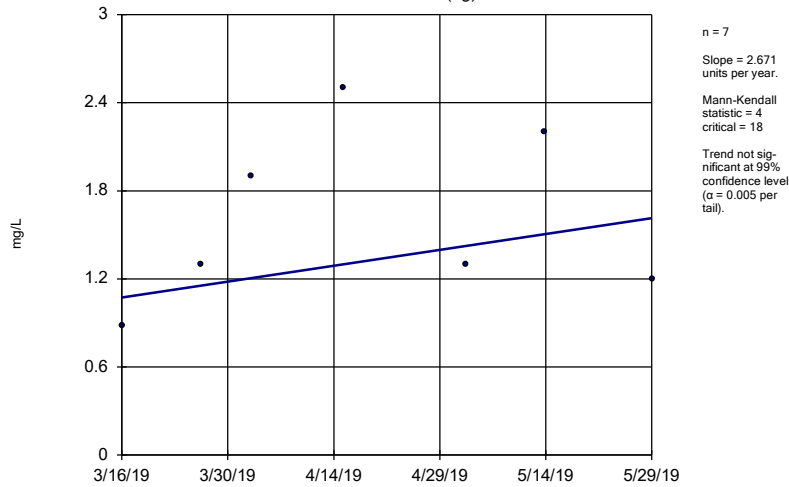
APMW-11 (bg)



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

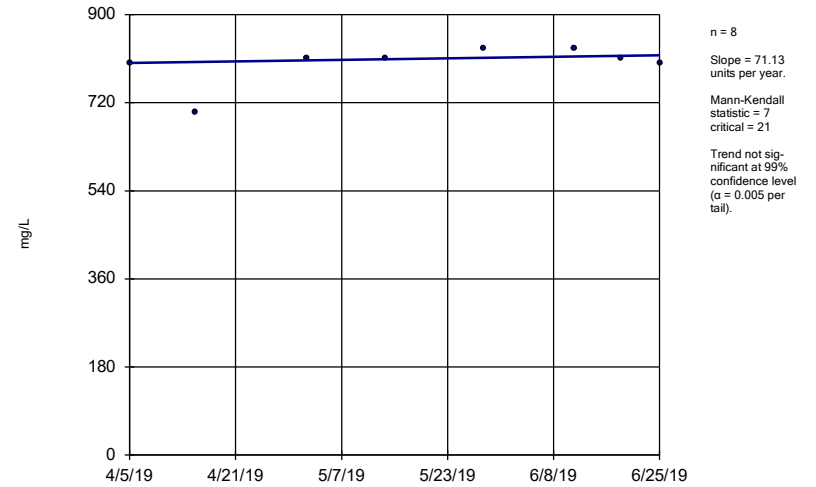
APMW-12 (bg)



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

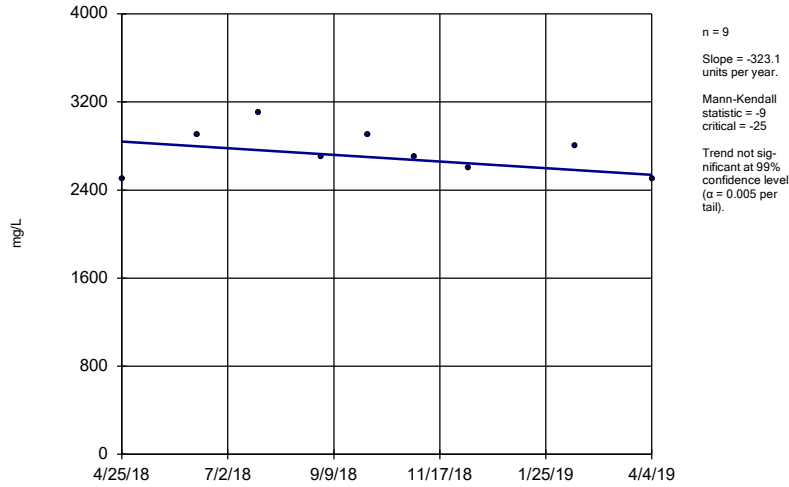
APMW-6R



Constituent: Sulfate Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

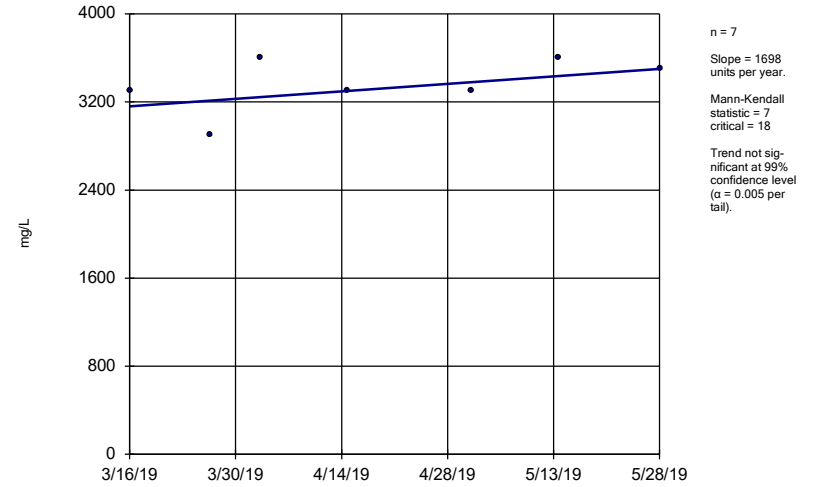
APMW-10



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

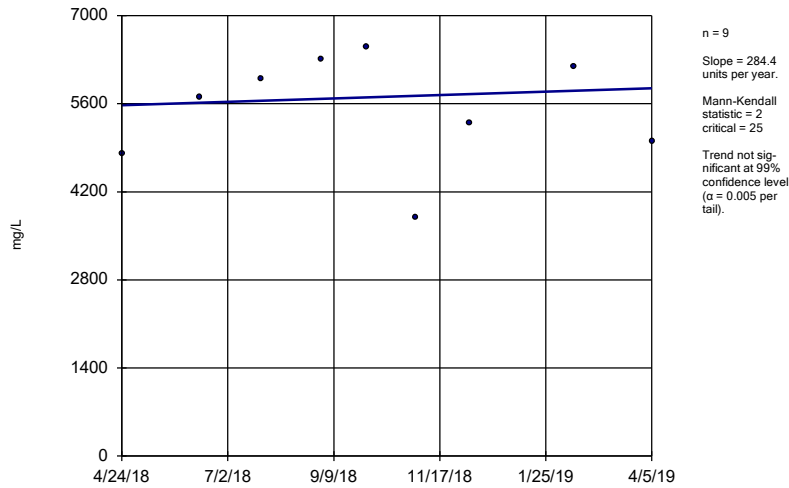
APMW-1R



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

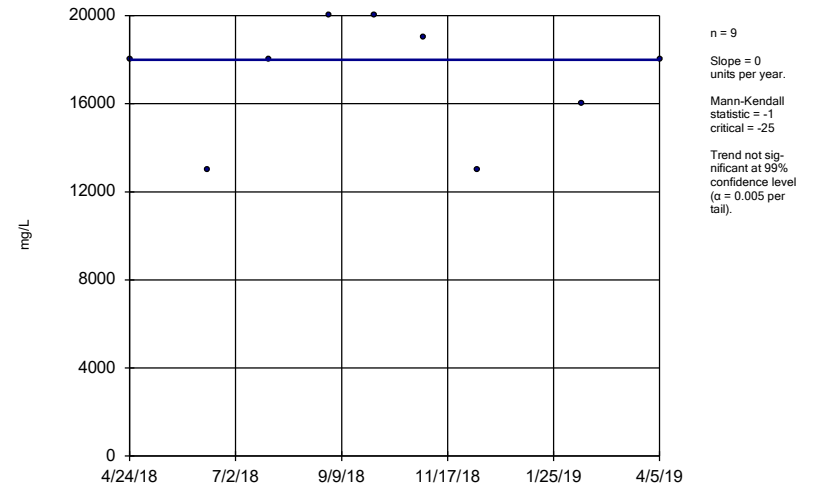
APMW-2



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

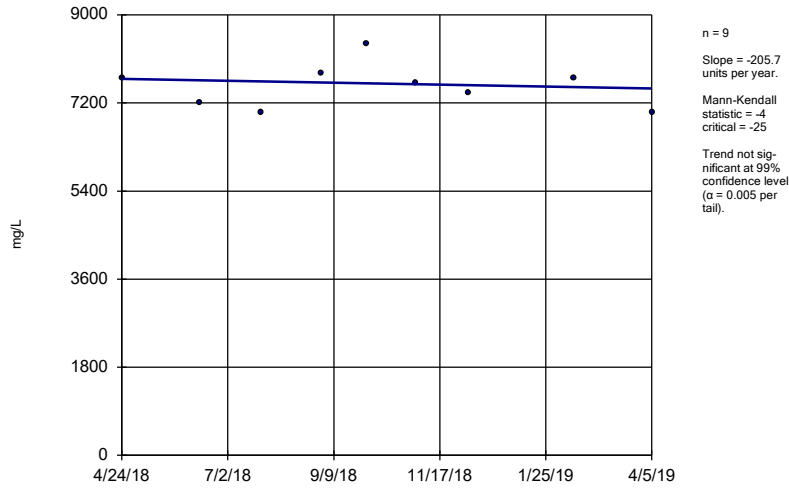
APMW-3



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

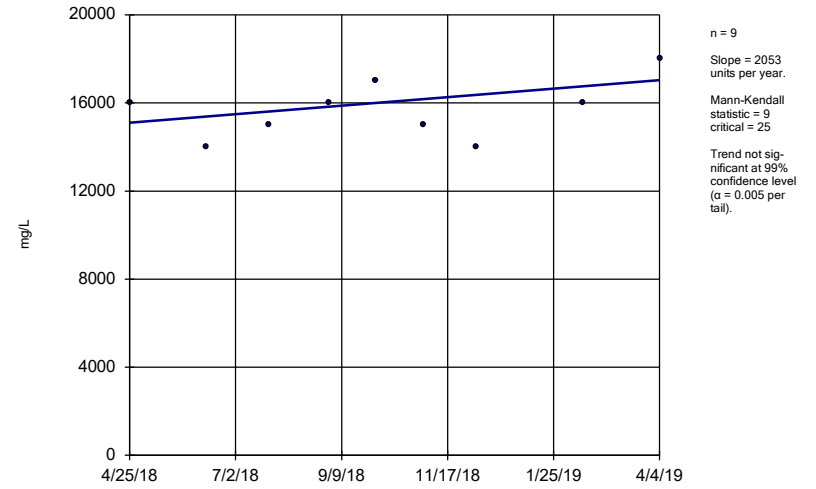
APMW-4



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

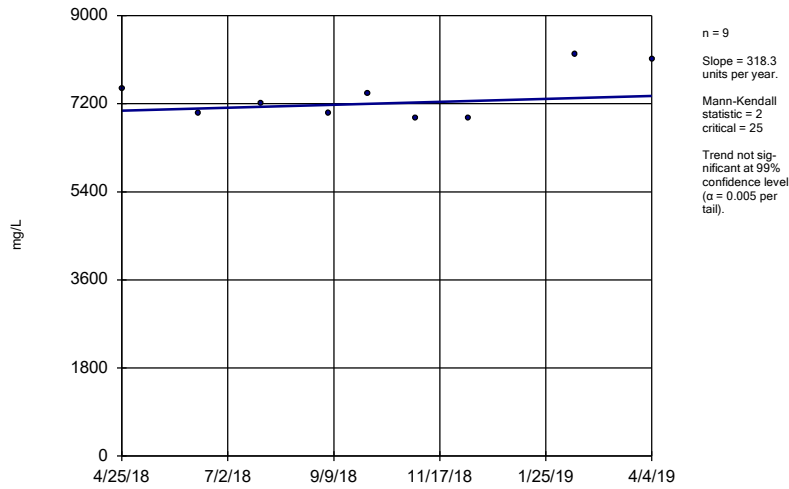
APMW-5



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

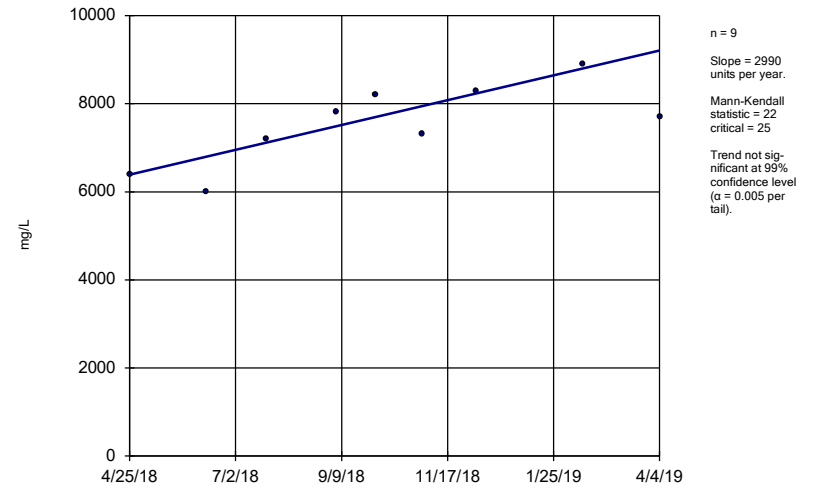
APMW-7



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

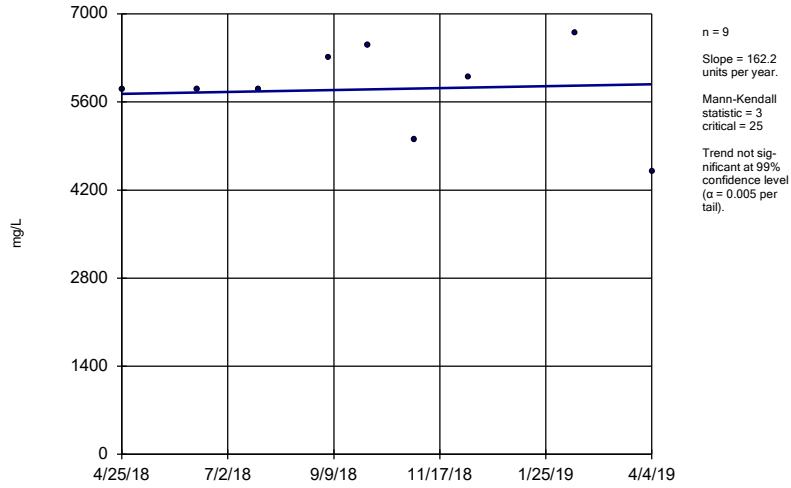
APMW-8



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

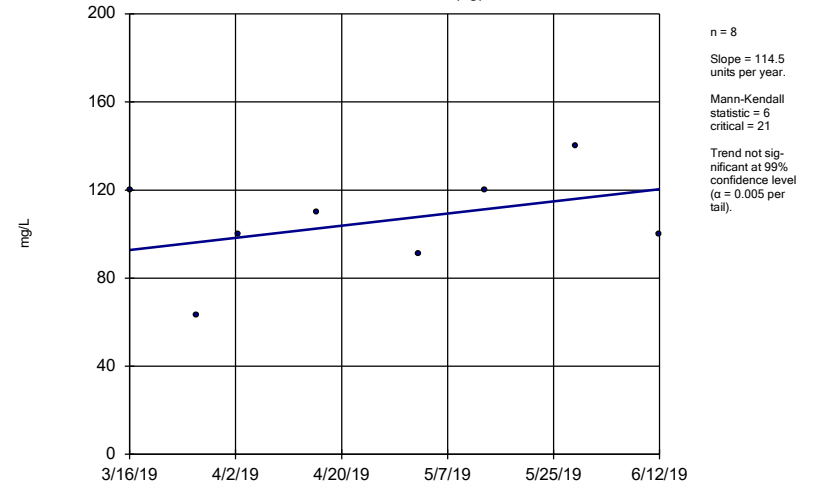
APMW-9



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

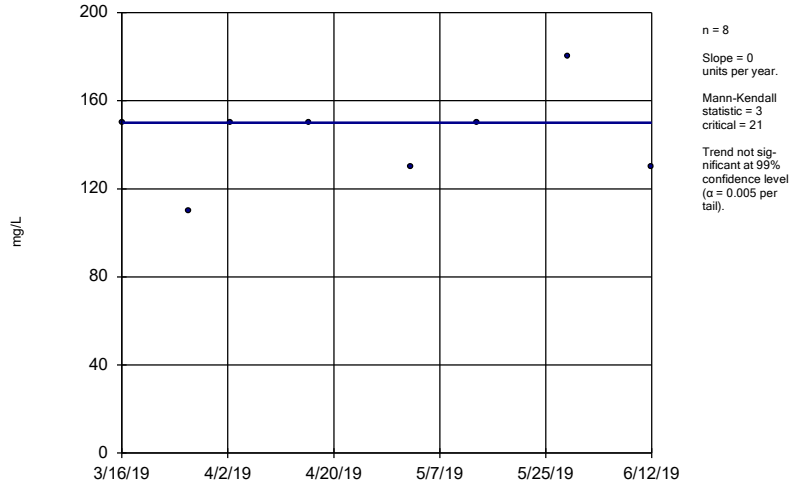
APMW-11 (bg)



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Sen's Slope Estimator

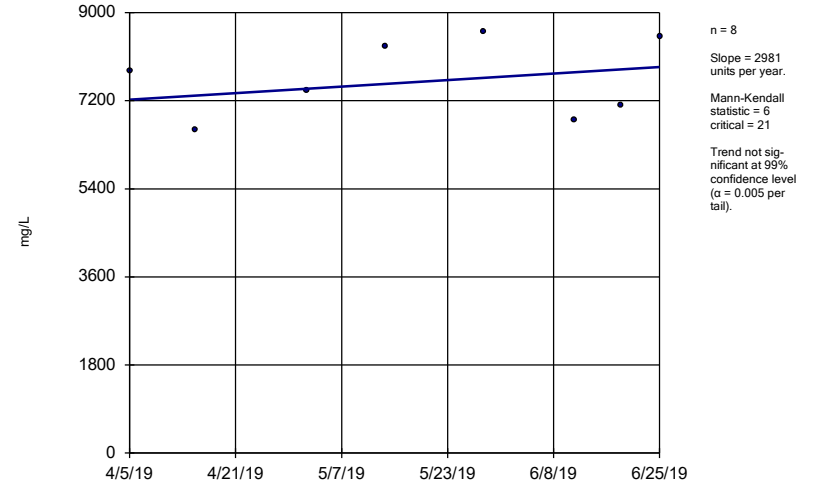
APMW-12 (bg)



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

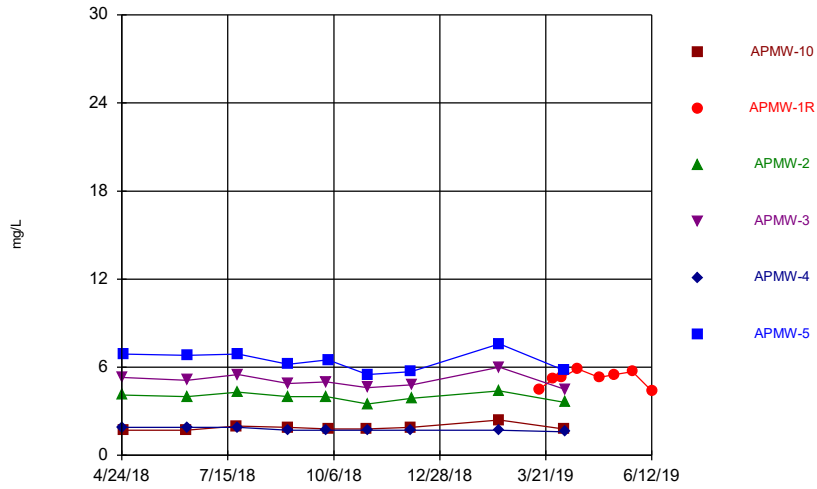
Sen's Slope Estimator

APMW-6R



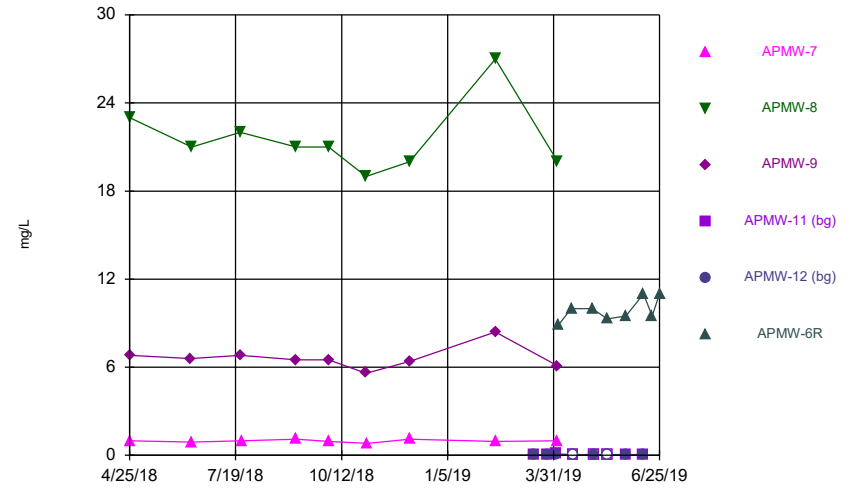
Constituent: Total Dissolved Solids Analysis Run 8/1/2019 12:30 PM View: Trend Tests
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



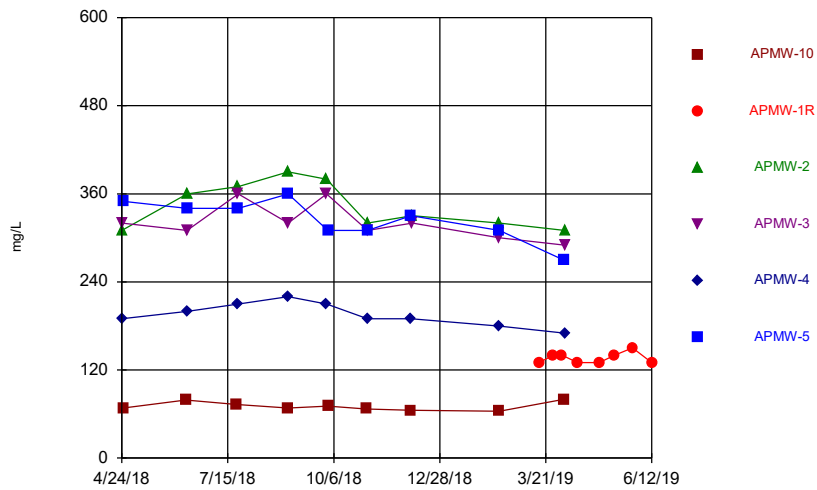
Constituent: Boron Analysis Run 8/1/2019 1:32 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



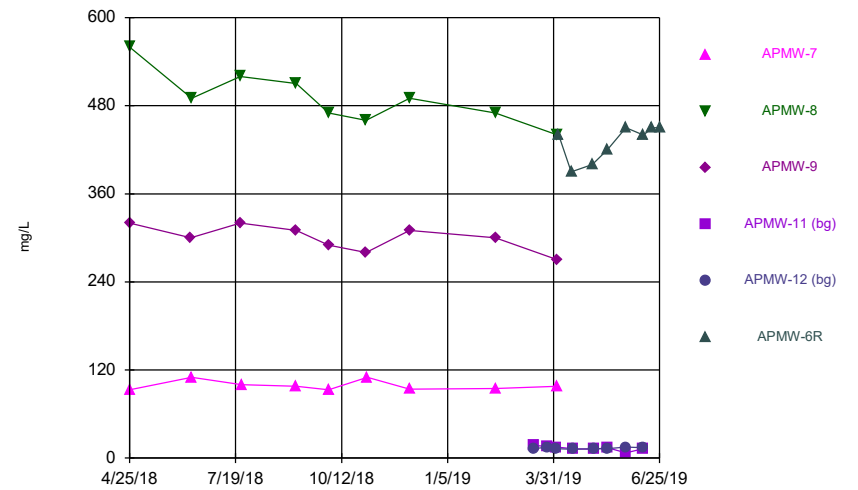
Constituent: Boron Analysis Run 8/1/2019 1:32 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Calcium Analysis Run 8/1/2019 1:32 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Calcium Analysis Run 8/1/2019 1:32 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series

Constituent: Boron (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			4.1	5.3	1.9	
4/25/2018	1.7					6.9
6/13/2018	1.7					
6/14/2018			4	5.1	1.9	6.8
7/23/2018	2					
7/24/2018			4.3	5.5	1.9	6.9
9/1/2018	1.9		4	4.9	1.7	6.2
10/1/2018			4	5	1.7	
10/2/2018	1.8					6.5
11/1/2018	1.8					
11/2/2018			3.5	4.6	1.7	5.5
12/6/2018	1.9				1.7	5.7
12/7/2018			3.9	4.8		
2/13/2019	2.4		4.4	6	1.7	7.6
3/16/2019		4.5				
3/27/2019		5.2				
4/3/2019		5.3				
4/4/2019	1.8					5.8
4/5/2019			3.6	4.5	1.6	
4/15/2019		5.9				
5/2/2019		5.3				
5/14/2019		5.5				
5/28/2019		5.7				
6/12/2019		4.4				

Time Series

Constituent: Boron (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	1	23	6.8			
6/13/2018			6.6			
6/14/2018	0.91	21				
7/23/2018		22	6.8			
7/24/2018	1					
9/6/2018	1.1	21	6.5			
10/2/2018	0.95	21	6.5			
11/1/2018		19	5.6			
11/2/2018	0.82					
12/6/2018	1.1	20	6.4			
2/13/2019	0.95	27	8.4			
3/16/2019				0.028 (J)	0.035 (J)	
3/27/2019				0.027 (J)	0.033 (J)	
4/3/2019				0.089	0.023 (J)	
4/4/2019	0.98	20	6.1			
4/5/2019						8.9
4/15/2019						10
4/16/2019				<0.05	<0.05	
5/2/2019						10
5/3/2019				<0.05	0.021 (J)	
5/14/2019				<0.05	<0.05	9.3
5/29/2019				0.034 (J)	0.044 (J)	9.5
6/12/2019				0.05 (J)	0.047 (J)	11
6/19/2019						9.5
6/25/2019						11

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

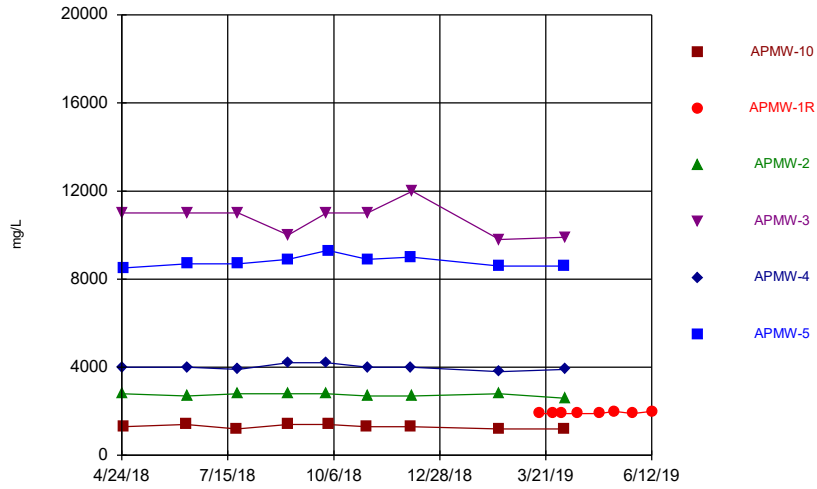
	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			310	320	190	
4/25/2018	68					350
6/13/2018	79					
6/14/2018			360	310	200	340
7/23/2018	73					
7/24/2018			370	360	210	340
9/1/2018	68		390	320	220	360
10/1/2018			380	360	210	
10/2/2018	71					310
11/1/2018	67					
11/2/2018			320	310	190	310
12/6/2018	65				190	330
12/7/2018			330	320		
2/13/2019	64		320	300	180	310
3/16/2019		130				
3/27/2019		140				
4/3/2019		140				
4/4/2019	80					270
4/5/2019			310	290	170	
4/15/2019		130				
5/2/2019		130				
5/14/2019		140				
5/28/2019		150				
6/12/2019		130				

Time Series

Constituent: Calcium (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

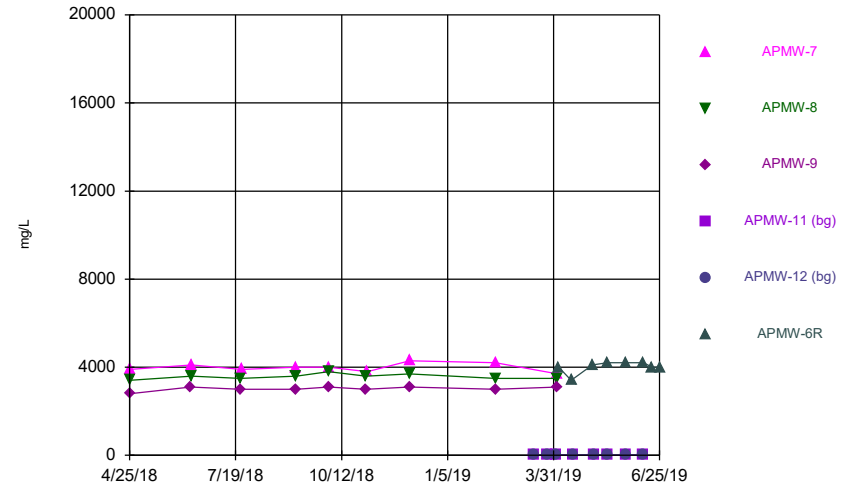
	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	93	560	320			
6/13/2018			300			
6/14/2018	110	490				
7/23/2018		520	320			
7/24/2018	100					
9/6/2018	98	510	310			
10/2/2018	93	470	290			
11/1/2018		460	280			
11/2/2018	110					
12/6/2018	94	490	310			
2/13/2019	95	470	300			
3/16/2019				17	13	
3/27/2019				16	15	
4/3/2019				15	13	
4/4/2019	98	440	270			
4/5/2019						440
4/15/2019						390
4/16/2019				13	12	
5/2/2019						400
5/3/2019				12	13	
5/14/2019				14	13	420
5/29/2019				7	15	450
6/12/2019				13	14	440
6/19/2019						450
6/25/2019						450

Time Series



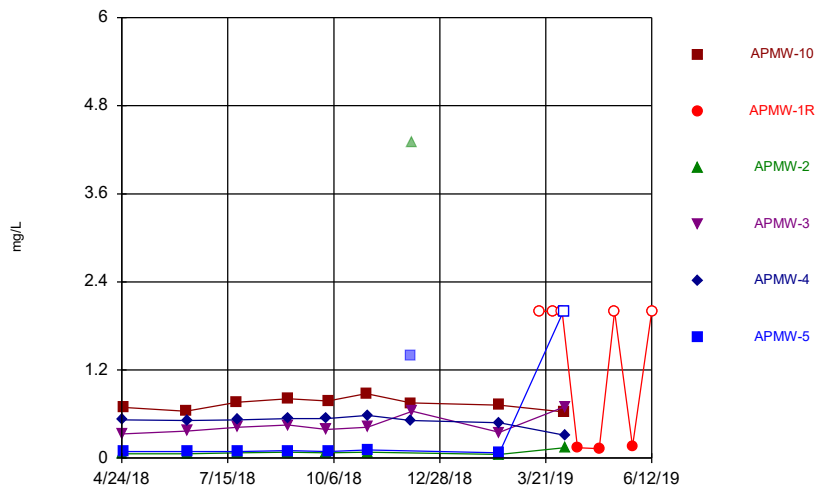
Constituent: Chloride Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



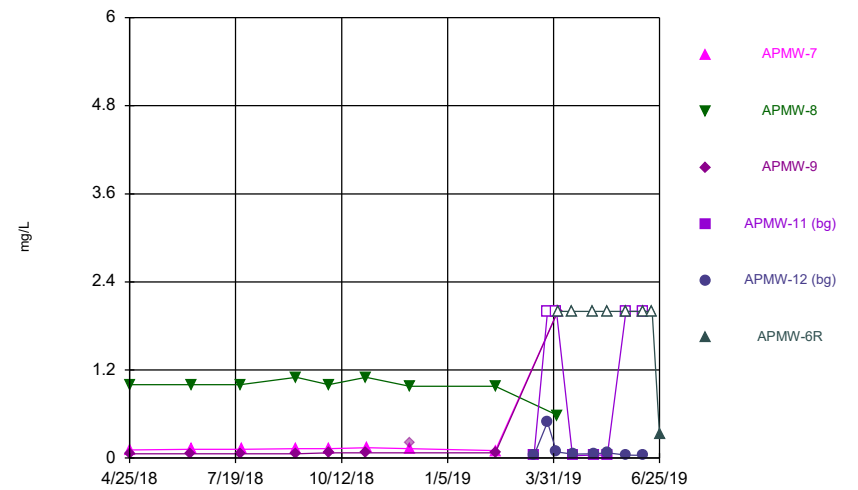
Constituent: Chloride Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Fluoride Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Fluoride Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			2800	11000	4000	
4/25/2018	1300					8500
6/13/2018	1400					
6/14/2018			2700	11000	4000	8700
7/23/2018	1200					
7/24/2018			2800	11000	3900	8700
9/1/2018	1400		2800	10000	4200	8900
10/1/2018			2800	11000	4200	
10/2/2018	1400					9300
11/1/2018	1300					
11/2/2018			2700	11000	4000	8900
12/6/2018	1300				4000	9000
12/7/2018			2700	12000		
2/13/2019	1200		2800	9800	3800	8600
3/16/2019		1900				
3/27/2019		1900				
4/3/2019		1900				
4/4/2019	1200					8600
4/5/2019			2600	9900	3900	
4/15/2019		1900				
5/2/2019		1900				
5/14/2019		2000				
5/28/2019		1900				
6/12/2019		2000				

Time Series

Constituent: Chloride (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	3900	3400	2800			
6/13/2018			3100			
6/14/2018	4100	3600				
7/23/2018		3500	3000			
7/24/2018	3900					
9/6/2018	4000	3600	3000			
10/2/2018	4000	3800	3100			
11/1/2018		3600	3000			
11/2/2018	3800					
12/6/2018	4300	3700	3100			
2/13/2019	4200	3500	3000			
3/16/2019				9.3	14	
3/27/2019				8.2	15	
4/3/2019				8.7	15	
4/4/2019	3700	3500	3100			
4/5/2019						4000
4/15/2019						3400
4/16/2019				8.7	14	
5/2/2019						4100
5/3/2019				9.3	15	
5/14/2019				8.8	15	4200
5/29/2019				8.8	14	4200
6/12/2019				8.8	15	4200
6/19/2019						4000
6/25/2019						4000

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
 Plant Watson Client: Southern Company Data: Plant Watson AP CCR

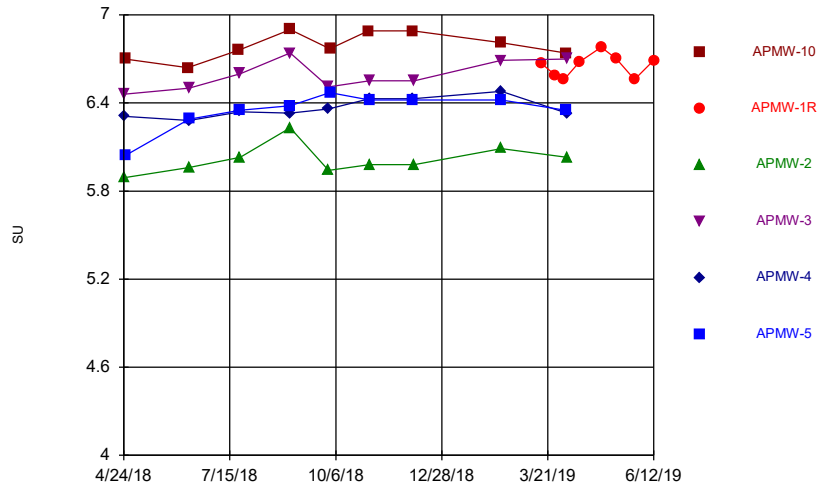
	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			0.06 (J)	0.33	0.52	
4/25/2018	0.69					0.09 (J)
6/13/2018	0.64					
6/14/2018			0.06 (J)	0.37	0.51	0.09 (J)
7/23/2018	0.76					
7/24/2018			0.07 (J)	0.42	0.52	0.09 (J)
9/1/2018	0.81		0.08 (J)	0.45	0.54	0.1
10/1/2018			0.07 (J)	0.39	0.54	
10/2/2018	0.78					0.09 (J)
11/1/2018	0.88					
11/2/2018			0.08 (J)	0.42	0.58	0.11
12/6/2018	0.75				0.51	1.4 (o)
12/7/2018			4.3 (o)	0.64		
2/13/2019	0.72		0.05 (J)	0.35	0.48	0.07 (J)
3/16/2019		<2				
3/27/2019		<2				
4/3/2019		<2				
4/4/2019	0.63					<2
4/5/2019			0.14 (J)	0.7 (J)	0.31 (J)	
4/15/2019		0.14 (J)				
5/2/2019		0.13 (J)				
5/14/2019		<2				
5/28/2019		0.16 (J)				
6/12/2019		<2				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

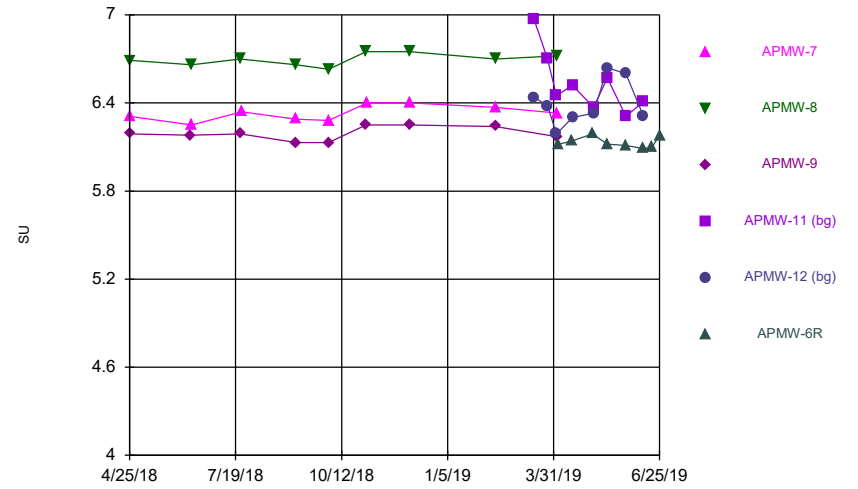
	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	0.11	1	0.06 (J)			
6/13/2018			0.06 (J)			
6/14/2018	0.12	1				
7/23/2018		1	0.06 (J)			
7/24/2018	0.12					
9/6/2018	0.13	1.1	0.06 (J)			
10/2/2018	0.13	1	0.07 (J)			
11/1/2018		1.1	0.07 (J)			
11/2/2018	0.14					
12/6/2018	0.13	0.98	0.21 (o)			
2/13/2019	0.1	0.98	0.07 (J)			
3/16/2019				0.047 (J)	0.041 (J)	
3/27/2019				<2	0.49	
4/3/2019				<2	0.086 (J)	
4/4/2019	<2	0.58 (J)	<2			
4/5/2019						<2
4/15/2019						<2
4/16/2019				0.034 (J)	0.055 (J)	
5/2/2019						<2
5/3/2019				0.042 (J)	0.058 (J)	
5/14/2019				0.039 (J)	0.071 (J)	<2
5/29/2019				<2	0.042 (J)	<2
6/12/2019				<2	0.037 (J)	<2
6/19/2019						<2
6/25/2019						0.32 (J)

Time Series



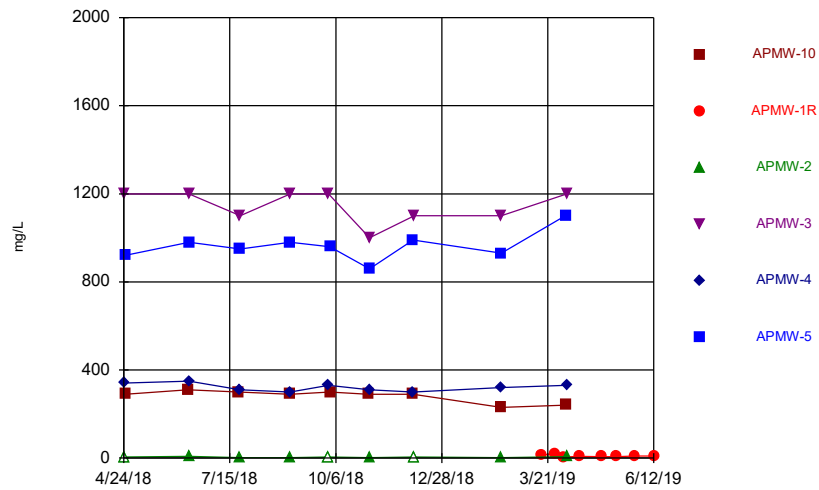
Constituent: pH Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



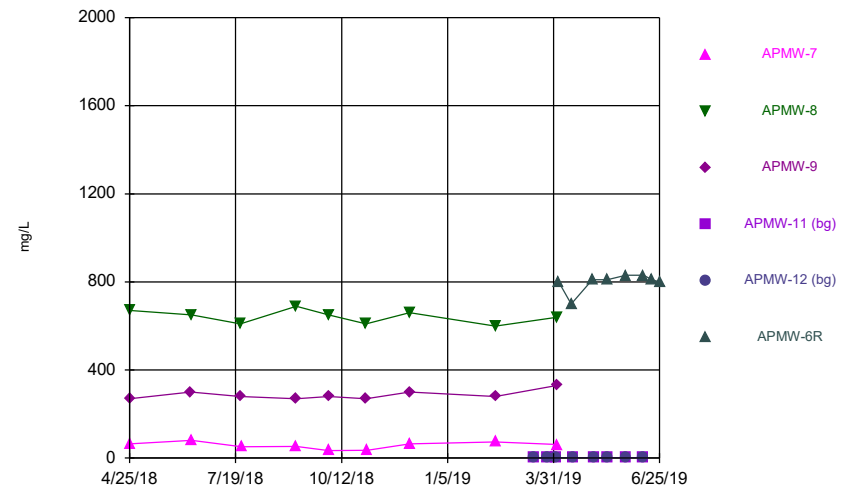
Constituent: pH Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Sulfate Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Sulfate Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series

Constituent: pH (SU) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			5.89	6.46	6.31	
4/25/2018	6.7					6.04
6/13/2018	6.64					
6/14/2018			5.96	6.5	6.28	6.29
7/23/2018	6.76					
7/24/2018			6.03	6.6	6.34	6.35
9/1/2018	6.9		6.23	6.74	6.33	6.38
10/1/2018			5.94	6.51	6.36	
10/2/2018	6.77					6.47
11/1/2018	6.89					
11/2/2018			5.98	6.55	6.43	6.42
12/6/2018	6.89				6.43	6.42
12/7/2018			5.98	6.55		
2/13/2019	6.81		6.09	6.69	6.48	6.42
3/16/2019		6.67				
3/27/2019		6.59				
4/3/2019		6.56				
4/4/2019	6.74					6.35
4/5/2019			6.03	6.7	6.33	
4/15/2019		6.68				
5/2/2019		6.78				
5/14/2019		6.7				
5/28/2019		6.56				
6/12/2019		6.69				

Time Series

Constituent: pH (SU) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	6.31	6.69	6.19			
6/13/2018			6.18			
6/14/2018	6.25	6.66				
7/23/2018		6.7	6.19			
7/24/2018	6.34					
9/6/2018	6.29	6.66	6.13			
10/2/2018	6.28	6.63	6.13			
11/1/2018		6.75	6.25			
11/2/2018	6.4					
12/6/2018	6.4	6.75	6.25			
2/13/2019	6.37	6.7	6.24			
3/16/2019				6.97	6.44	
3/27/2019				6.7	6.38	
4/3/2019				6.45	6.19	
4/4/2019	6.33	6.72	6.17			
4/5/2019						6.12
4/15/2019						6.14
4/16/2019				6.52	6.3	
5/2/2019						6.19
5/3/2019				6.37	6.33	
5/14/2019				6.57	6.64	6.12
5/29/2019				6.31	6.6	6.11
6/12/2019				6.41	6.31	6.09
6/19/2019						6.1
6/25/2019						6.18

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

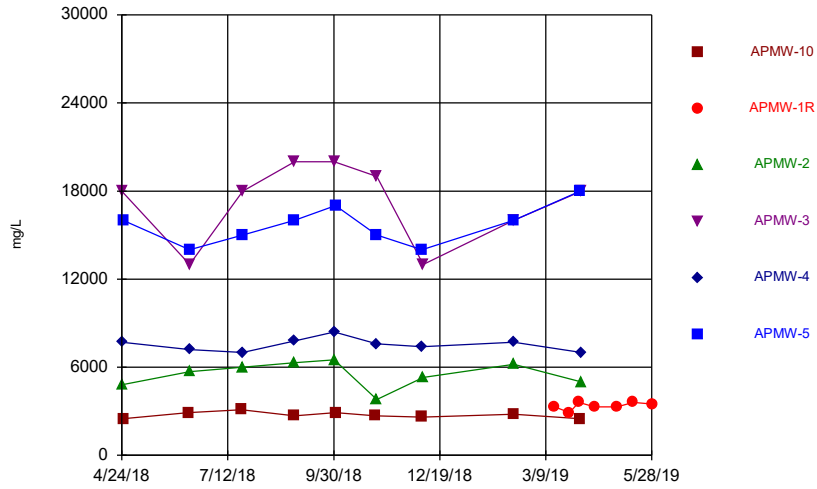
	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			<5	1200	340	
4/25/2018	290					920
6/13/2018	310					
6/14/2018			7.2	1200	350	980
7/23/2018	300					
7/24/2018			2.7 (J)	1100	310	950
9/1/2018	290		1.5 (J)	1200	300	980
10/1/2018			<5	1200	330	
10/2/2018	300					960
11/1/2018	290					
11/2/2018			1.9 (J)	1000	310	860
12/6/2018	290				300	990
12/7/2018			<5	1100		
2/13/2019	230		1.5 (J)	1100	320	930
3/16/2019		14				
3/27/2019		19				
4/3/2019		4.6 (J)				
4/4/2019	240					1100
4/5/2019			7	1200	330	
4/15/2019		8.6				
5/2/2019		6				
5/14/2019		5.8				
5/28/2019		9.4				
6/12/2019		8.8				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

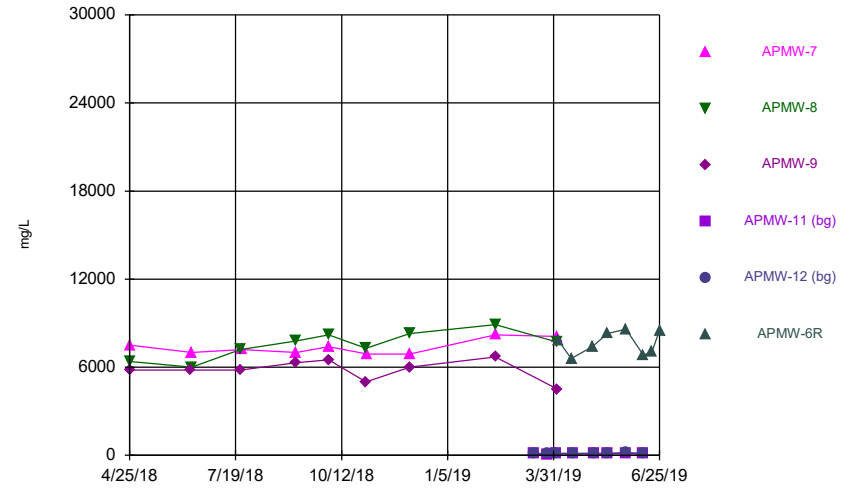
	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	65	670	270			
6/13/2018			300			
6/14/2018	81	650				
7/23/2018		610	280			
7/24/2018	52					
9/6/2018	53	690	270			
10/2/2018	34	650	280			
11/1/2018		610	270			
11/2/2018	35					
12/6/2018	65	660	300			
2/13/2019	74	600	280			
3/16/2019				3.6	0.88 (J)	
3/27/2019				0.81 (J)	1.3	
4/3/2019				1.1	1.9	
4/4/2019	61	640	330			
4/5/2019						800
4/15/2019						700
4/16/2019				0.68 (J)	2.5	
5/2/2019						810
5/3/2019				1.1	1.3	
5/14/2019				1.3	2.2	810
5/29/2019				2.1	1.2	830
6/12/2019				1.9	1.1	830
6/19/2019						810
6/25/2019						800

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 8/1/2019 1:32 PM View: PL's
Plant Watson Client: Southern Company Data: Plant Watson AP CCR

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-10	APMW-1R	APMW-2	APMW-3	APMW-4	APMW-5
4/24/2018			4800	18000	7700	
4/25/2018	2500					16000
6/13/2018	2900					
6/14/2018			5700	13000	7200	14000
7/23/2018	3100					
7/24/2018			6000	18000	7000	15000
9/1/2018	2700		6300	20000	7800	16000
10/1/2018			6500	20000	8400	
10/2/2018	2900					17000
11/1/2018	2700					
11/2/2018			3800	19000	7600	15000
12/6/2018	2600				7400	14000
12/7/2018			5300	13000		
2/13/2019	2800		6200	16000	7700	16000
3/16/2019		3300				
3/27/2019		2900				
4/3/2019		3600				
4/4/2019	2500					18000
4/5/2019			5000	18000	7000	
4/15/2019		3300				
5/2/2019		3300				
5/14/2019		3600				
5/28/2019		3500				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 8/1/2019 1:37 PM View: PL's

Plant Watson Client: Southern Company Data: Plant Watson AP CCR

	APMW-7	APMW-8	APMW-9	APMW-11 (bg)	APMW-12 (bg)	APMW-6R
4/25/2018	7500	6400	5800			
6/13/2018			5800			
6/14/2018	7000	6000				
7/23/2018		7200	5800			
7/24/2018	7200					
9/6/2018	7000	7800	6300			
10/2/2018	7400	8200	6500			
11/1/2018		7300	5000			
11/2/2018	6900					
12/6/2018	6900	8300	6000			
2/13/2019	8200	8900	6700			
3/16/2019				120	150	
3/27/2019				63	110	
4/3/2019				100	150	
4/4/2019	8100	7700	4500			
4/5/2019						7800
4/15/2019						6600
4/16/2019				110	150	
5/2/2019						7400
5/3/2019				91	130	
5/14/2019				120	150	8300
5/29/2019				140	180	8600
6/12/2019				100	130	6800
6/19/2019						7100
6/25/2019						8500